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PART FIRST.

Original Communications.

ART. I.—*A Catalogue of the principal known Medicinal Plants, native and exotic, growing in the State of New-York, with brief Notes on their Composition, Properties, etc.* By the EDITOR. (*Concluded.*)

AQUIFOLIACEÆ, *De Cand.*—(THE HOLLY TRIBE.)

ILEX OPACA, *Ait.*, (American Holly). An evergreen tree, 10 to 30 feet high. A viscid substance called *bird-lime* is prepared from its inner bark. The leaves are bitter, and diaphoretic; *tonic*, contain a peculiar bitter principle, *ilicin;* berries are the size of a large pea, persistent, bright red, and are purgative, diuretic, and emetic; ten or twelve will generally prove cathartic. This plant has been employed successfully in the cure of intermittents, jaundice, and dropsy. Found near Kingsbridge, island of New York.

PRINOS* VERTICILLATUS, *Linn.*, (Black Alder, Common Winter Berry). This shrub has round berries, size of a pea, scarlet when ripe, and several clustered together.—*The bark.* Taste bitter and astringent, tonic and astringent, recommended in diarrhœa, dropsy, intermittents, and diseases connected with debility; a very useful remedy in cutaneous diseases, taken internally in form of strong decoction, and applied as a wash; also in gangrenous and ill-conditioned ulcers. The decoction should be made by boiling ℥ ij. of the bark in 3 pints of water to a quart. Dose ℥ ij. to ℥ iij. Dose of powder ℈ ss. to ℈ i.

P. GLABRA, *Linn.*, (Inkberry, Evergreen Winterberry). Has the same medicinal properties as the above.

EBENACEÆ, *Vent.*—(THE EBONY TRIBE.)

DIOSPYROS† VIRGINIANA, *Linn.*, (Persimmon, U. S. P.). The *bark* and *fruit;* grows in moist places in the southern parts of the State.

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* From the Greek *prio*, to saw, the leaves being serrated.

† From the Greek *Dios*, Jupiter, and *pyros*, fruit, meaning heavenly fruit.

Fruit roundish, about one inch in diameter, reddish orange when ripe, fleshy, very astringent until acted on by frost, then soft and luscious; when green the fruit is excessively astringent. In the southern and western States it is made into cakes with bran, and used in preparing beer, with the addition of water, hops, and yeast. A spiritous liquor is obtained by distilling the fermented infusion. The unripe fruit is recommended by Dr. Mettauer, of Va., in chronic dysentery, diarrhœa, and uterine hemorrhage, in form of infusion, syrup, or vinous tincture. Bark is used as a tonic in intermittents, and to make an astringent gargle in ulcerated sore throats, etc. The ripe fruit is grateful, and it is said, possesses anthelmintic properties.

PLANTAGINACEÆ, *Juss*—(THE PLANTAIN TRIBE.)

PLANTAGO MAJOR, *Linn.*, (Common Plantain). The leaves and root refrigerant, alterative, diuretic, and astringent, employed by the ancients in hemorrhages, visceral obstructions, phthisis, dysentery, etc.; externally to ulcers and scrofulous tumors, and as a dressing to blisters and sores, given in a strong decoction, or the expressed juice.

P. CORDATA, *Lam.*, (Heart-leaved Plantain.)

P. LANCEOLATA, *Linn.*, (Rib Grass, English Plantain). These two species have the same properties as the former, and may be substituted for them. The same remark will probably apply to the P. VIRGINICA, *Linn.*, (White Plantain,) P. MARATIMA, *Linn.*, (Sea Plantain,) and P. PUSILLA, *Nutt.*, (Dwarf Plantain).

PLUMBAGINACEÆ, *Juss.*—(THE LEADWORT TRIBE.)

STATICE LIMONIUM, *Linn.*, (Common Marsh Rosemary). This is the *S. Caroliniana* of Pursh, Bigelow, Griffith, and others. Found on our seacoast. The *root* bitter, and powerfully astringent; virtues imparted to water and alcohol. Contains 12 per cent. of tannin, no gallic acid. Bigelow thinks it equal in astringency to galls. A very useful remedy where powerful astringents are indicated, as the latter stages of diarrhœa, and as a gargle in ulcerated sore throat. Given in infusion, decoction, extract, or tincture.—(See *Dr. Mott's Inaug. Thesis, Experiment. Inquir. on Statice, &c.*)

OROBANCHACEÆ, *L. C. Rich.*—(THE BROOM RAPE TRIBE.)

OROBANCHE* AMERICANA, *Linn.*, (Squaw Root, Cancer Root). The plant has an unpleasant, nauseous, bitter, and astringent taste, used internally in bowel complaints. The powder has considerable reputation as a local application to cancerous ulcers. Supposed to have been an ingredient of *Martin's Cancer Powder*, (*Barton*), *Wood and Bache.* Astringent, antiseptic, antisyphilitic, considered at the west as a specific in gonorrhœa and syphilis.

EPIPHEGUS† AMERICANA, *Nutt.*, (Beech Drops, Cancer-root), has the same properties as the above; they are often confounded, though different species. (See *Torrey's Flora*). Has considerable reputation

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* From the Greek *crobus*, a vetch, and *anchein*, to strangle, from its supposed injurious effects.

† From the Greek *epi*, upon, and *phegus*, the beech, because it grows upon the roots of this tree.

in dysentery and diarrhœa, etc., though its powers are probably overrated.

BIGNONIACIÆ, *Juss.*—(THE TRUMPET FLOWER TRIBE.)

CATALPA* SYRINGÆFOLIA, *Sims.*, (Catalpa, Indian Bean), more esteemed for ornament than use. The wood has a fine texture, and takes a good polish. Supposed to possess medicinal properties. The *seeds* have been employed with success in asthma— ℥ iv. of seeds to be boiled in ℥ xij. of water down to ℥ vi., the whole to be given night and morning. (*Jour. Phil. Col. Phar.* 6. 352.)

SCROPHULARIACEÆ, *R. Br.*—(THE FIGWORT TRIBE.)

VERBASCUM† THAPSUS, *Linn.*, (Common Mullein). The leaves and flowers have a slight narcotic smell, mucilaginous and bitter taste, impart their virtues to water by infusion; demulcent and emollient, and possess mild anodyne properties; hence used in catarrh and other pectoral complaints. The decoction of leaves is a good remedy in diarrhœa and dysentery, and a good anodyne external emollient. The flowers, when dried in the sun, yield a fatty oil, which is useful in piles. A good emollient ointment may also be prepared by boiling the leaves in lard.

The V. BLATTARIA, *Linn.*, (Moth Mullein), and B. LYCHNITIS, *Linn.*, (White Mullein), probably possess similar virtues.

SCROPHULARIA MARILANDICA, *Linn.*, (Figwort). This plant, which is nearly allied to the *S. Nudosa* of Europe, probably possesses similar virtues, i.e., is anodyne, diuretic, diaphoretic, tonic, anthelmintic, and alterative; hence employed in scrofula, from which circumstance its name is derived. The bruised root has considerable reputation in domestic practice, as a poultice for reducing inflammation in tumors.

LINARIA‡ VULGARIS, *Maench*, (Common Toad Flax, Great Dragon). The herb, collected when in flower, tastes bitter, slightly acrid, and weakly saline, diuretic and cathartic. The infusion has been employed with success in dropsy, jaundice, and cutaneous affections, also in the latter as external fomentations, or an ointment, by boiling the flowers in lard. The flowers may be used for dying yellow.

COLLINSIA§ VERNA, *Nutt.*, (Early parti-colored Collinsia). CHELONE‖ GLABRA, *Linn.*, (Snake Head). Several varieties. The *leaves* inodorous, but very bitter, contain gallic acid and bitter extractive; tonic and cathartic; in small doses laxative and deobstruent. Rafinesque says it acts powerfully on the liver. It is much employed as a tonic by the Thomsonians, under the name of *Balmony*. The Shakers use it also, and put it up for sale. It deserves a fuller examination.

GRATIOLA VIRGINICA, *Linn.*, (Common Hedge Hyssop).

G. AUREA, *Muhl.*, (Golden Hedge Hyssop). The European Hedge

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* Corruption of *catawba*, the Indian name for this tree.

† Altered from *barbascum*, the leaves being covered with a *barba* or beard.

‡ From the Latin *linum*, flax, which the leaves resemble.

§ In honor of *Z. Collins*, an eminent botanist of Philadelphia.

‖ From the Greek *chelone*, a tortoise, the flower resembling the head of that animal.

Hyssop is an active, drastic cathartic, diuretic, and emetic, and contains *Veratria.* The above species have not been fully investigated, but if we mistake not, they will be found to possess similar properties. The *Aurea* certainly has very powerful properties, and we believe might be substituted for the *Officinalis.* We would recommend a tincture of it to be tried in rheumatism and gout, as it probably operates in a manner similar to colchicum and veratrum.

Veronica Officinalis, *Linn.*, (Common Speedwell). This plant has an astringent, warm, bitterish taste, and is considered diuretic, diaphoretic, tonic, and expectorant; formerly much employed in pectoral and cutaneous diseases, nephritic complaints, and wounds. Has been used as a substitute for tea.

V. Beccabunga, *Linn.*, (Brookline). A very succulent plant, forms a good emollient fomentation and poultice, formerly considered depurative and alterative.

V. Peregrina, *Linn.* Once employed in scrofulous affections. (See *Bart. Med. & Phys. Jour.* 3, *p.* 24.)

Paederota Virginica, *Torrey*, (Culver's Root, or Physic, formerly Leptandria Virginica, *Nutt*). *The root.* This is bitter and nauseous, and yields its virtues to boiling water; acts powerfully as emetic and cathartic, when fresh—not so active when dry. Dose, xx. grs. to ʒj.

Verbenaceæ, *Juss.*—(The Vervain Tribe.)

Verbena* Hastata, *Linn.*, (Tall Blue Vervain).

V. Urticifolia, *Linn.*, (Common Vervain). A plant held sacred by the ancients, and employed in their religious rites; still worn around the neck for the cure of scrofula. It is bitter to the taste, and has tonic and emetic properties. Its medicinal virtues are not great.

Labiatæ, *Juss.*—(The Mint Tribe.)

Mentha† Viridis, *Linn.*, (Spearmint). M. Piperita, *Linn.*, (Peppermint). M. Canadensis, *Linn.*, (Canadian Mint). These species of mint are well known remedies as stimulants, in cases of flatulence, gastric debility, etc. The last is the only one indigenous to this country. The two former are grateful aromatic cordials, and used to allay nausea, relieve spasmodic pains of the digestive organs, expel flatus, and correct the taste of nauseating medicines. In fomentation over the stomach, they relieve nausea and vomiting, especially in cholera infantum of young children. In infusion or vol. oil. *Off. U. S. P.*

Lycopus‡ Virginicus, *Linn.*, (Bugle-weed). The whole herb; taste slightly bitter, odor peculiar, virtues imparted to boiling water. A mild astringent, narcotic, and depurative; has been used with success in incipient phthisis, and hemorrhage from the lungs. It lessens the frequency of the pulse, quiets irritation, and allays cough. Infusion best form of using it. (See *N. York Med. & Phys. Jour.* 1, 179.)

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* An alteration of the Celtic word *ferfaen*, from *fer* to drive away, and *faen* a stone, in allusion to its medicinal virtues.

† From *minthe*, a daughter of Caeytus, who, according to fable, was changed into this plant.

‡ From the Greek *lykos*, a wolf, and *pous*, foot; its leaves resembling the foot of that animal.

Monarda* Didyma, *Linn.*, (Oswego Tea). M. Fistulosa, *Linn.*, (Horse Mint, Wild Bergamot). M. Punctata, *Linn.*, (Horse Mint). All these species are more or less aromatic and pungent to the taste, and abound in vol. oil, which is separated by distillation. They are carminative and stimulant. The oil forms an excellent stimulating embrocation in rheumatism, flatulent colic, and in cases where such remedies are needed. (See *Phil. Med. Recorder, vol.* 1, *p.* 494.)

Pycnanthemum† Incanum, *Michx.*, (Common Mountain Mint). P. Muticum, *Pers.*, (Hairy-leaved Mountain Mint.) P. Lanceolatum, *Pursh*, (Virginian Thyme.) We have six species of mountain mint, most of which are used as domestic remedies to answer the same indications as the other species of mint.

Origanum‡ Vulgare, *Linn.*, (Common Wild Marjorum). This plant has a warm, pungent taste, and a peculiar aromatic odor, which are owing to a volatile oil. It is a stimulant, tonic, diaphoretic, and emmenagogue. The oil forms a good external stimulant as an embrocation in toothache, neuralgia, rheumatism, etc. *Off. U. S. P.*

Collinsonia§ Canadensis, *Linn.*, (Common Horse-balm, Stone Root, Knot Root). An indigenous plant, having a strong and disagreeable smell, and a warm pungent taste. Diuretic, diaphoretic, tonic, and astringent. The active principle is volatile, hence the fresh plant is to be preferred. The decoction of the fresh root is highly recommended in cystitis, gravel, leucorrhea, and dropsy, and it is a popular application in the form of fomentation, to ulcers, wounds, and bruises. It is apt to excite nausea and vomiting. The *Shakers* put up the root and sell it under the name of *Stone-root;* it is chiefly employed for diuretic and tonic purposes. The oil or tincture are the best preparations.

Canila Mariana, *Linn.*, (Common Ditany). A small indigenous herb, having a pungent taste and agreeable odour, depending on an essential oil. It is a gently stimulating aromatic and diaphoretic; a warm tea of it, like that of the mints, is a popular mode of inducing perspiration, in colds and fevers; to relieve colic, and promote the menstrual flow.

Hedeoma‖ Pulegioides, *Pers.*, (Pennyroyal). A well known indigenous annual plant, a very pleasant aromatic stimulant, emmenagogue, and diaphoretic; given in warm infusion on going to bed; also in flatulent colic, and sick stomach. The oil is a favorite mode of administration with some. *Off. U. S. P.*

Melissa¶ Clinopodium, *Benth.*, (Wild Basil, Field Thyme). M. Officinalis, (Common Balm.) These species contain a small quantity of essential oil of a peculiar flavor; it forms one of the best diaphoretic drinks in febrile complaints, and is very acceptable to the stomach.

Scutellaria** Lateriflora, *Linn.* (Mad-dog Scull-cap). Has no

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* In honor of *Monardez*, a Spanish botanist of the 16th century.

† From the Greek *pyknos*, dense, and *anthemon*, a flower, the flowers being in clusters.

‡ From *oros*, mountain, and *ganeas*, joy; because many of the species are fragrant and beautiful, and grow in hilly places.

§ In honor of *Peter Collinson*, of London, a distinguished patron of botany.

‖ From the Greek *hedys*, sweet, and *osme*, odor.

¶ From the Greek *melissa*, a bee, because its flowers are much sought after by that insect.

** From the Latin *scutella*, a little cup, from the appearance of the calyx.

sensible properties—had a considerable reputation at one time as a preventive of hydrophobia: at present few place any confidence in it as a prophylactic. (See *Barton in Phil. Med. and Phys. Jour.*, vol. 1.)

S. INTEGRIFOLIA, *Linn.* (Entire-leaved Scull-cap. This species is intensely bitter, and possesses decided tonic properties.

NEPETA* CATARIA, *Linn.* (Common Catnep, Cat-mint). The whole plant—odor unpleasant, bitter aromatic taste; a useful carminative in diseases of children. It is anodyne and decidedly antispasmodic, hence an excellent remedy in a paroxysm of hysteria—has considerable reputation in the treatment of amenorrhœa and chlorosis; also as an anthelmintic. Given to infants and young children in infusion.

LEONURUS† CARDIACA, *Linn.*, (Common Motherwort). Formerly in high repute as a medicine—a gentle, stimulating diaphoretic, and emmenagogue.

MARRUBIUM VULGARE, *Linn*, (Common Horehound). The whole plant is officinal. Stimulant, diuretic and tonic—in large doses laxative; a popular remedy in coughs, colds, and diseases of pulmonary organs, in the form of expressed juice, syrup or candy. We have known severe cases of chronic cough cured by the expressed juice taken in warm new milk.

BORAGINACEÆ, *Juss.*—(THE BORAGE TRIBE.)

PULMONARIA‡ VIRGINICA, *Linn.*, (Virginian Lungwort). As the species of this plant are emollient and demulcent, and have enjoyed a high reputation in pulmonary diseases, Dr. Griffith thinks they owe their efficacy to a reliance on the doctrine of signatures, the leaves having spots bearing some resemblance to the lungs.—The *virg.* is astringent, and is much used in some parts of the country in coughs and colds, and diseases of respiratory organs.

LITHOSPERMUM§ OFFICINALE AND ARVENSE, *Linn.*, (Gromwell, Stone-weed). The seeds have a greyish-white, pearly color, and a stony hardness. Formerly much employed as lithontriptic, from the supposed resemblance between the remedy and the complaint. Not used at present.

SYMPHYTUM‖ OFFICINALE, *Linn.*, (Common Comfrey). A highly mucilaginous plant, slightly astringent; it resembles closely the mallow; both contain an acid malate of *Altheine*. (*Jour. de Pharm.*, xiii., 635.) A popular remedy in catarrh, diarrhœa, dysentery, etc.

CYNOGLOSSUM¶ OFFICINALE, *Linn.*, (HOUND'S TONGUE.)

C. VIRGINICUM, *Linn.*, (Wild Comfrey). These plants have anodyne, demulcent, and astringent properties, and are employed as local

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* From the Greek *nepa*, a scorpion, the bite of which it was once supposed to cure.

† From the Greek *leon*, a lion, and *vara*, a tail, from a fancied resemblance of the plant.

‡ From the Latin *pulmones*, the lungs; they having been a remedy for diseases of this organ.

§ From *lithos*, a stone, and *sperma*, seed, which are very hard.

‖ From the Greek *symphyo*, to grow together, in allusion to its healing qualities.

¶ From the Greek *kyon*, a dog, and *glossa*, a tongue, from the shape of the leaves.

applications to scrofulous sores, burns, tumors, sprains, etc. The *Officinale* contains an odorous principle, tannin, and several salts. Dr. Griffith thinks the plant too much neglected. (*Med. Botany*, p. 500.)

Convolvulus* Panduratus, *Linn.*, (Wild Potato Vine). Indigenous; the root very large, 2 or 3 feet in length, about 3 inches thick, branched at bottom, has a somewhat acrid taste. Feebly cathartic, slightly diuretic, and useful in calculous complaints, and strangury; 40 grains of the root purge; might be given in extract. A favorite remedy with some botanic doctors. (*Wood & Bache.*)

Solanaceæ, *Juss.*—(The Night-Shade Tribe.)

Nicotiana† Rustica, *Linn.*, (Wild Tobacco). A naturalized plant, probably introduced by the Indians; contains *nicotina*, like common tobacco.

Datura Stramonium, *Linn.*, (Jamestown Weed). A powerful acro-narcotic; the seeds and leaves both contain the active principle *daturia;* a useful article in neuralgia and rheumatism, externally and internally used; also in asthma; it is slightly laxative; used to dilate the pupil. Cataplasms and ointment made of the leaves are also useful preparations, the latter in piles and painful ulcers, etc.

Hyoscyamus‡ Niger, *Linn.*, (Common Henbane). A powerful narcotic, antispasmodic and anodyne, with laxative properties. Its poisonous effects are owing to an active principle, *hyoscyamia;* our most valuable anodyne, next to opium. Exotic.

Solanum Dulcamara, *Linn.*, (Bitter-sweet, Woody Night-Shade). Supposed to possess deobstruent and alterative properties, very slightly narcotic, not poisonous, also diuretic and diaphoretic; given in decoction.

Solanum Nigrum, *Linn.*, (Common Night-Shade.) A powerful narcotic; poisonous; introduced from Europe.

S. Tuberosum, *Linn.*, (Common Potato). The stalks possess narcotic properties, also the epidermis of the tubers, especially when much exposed to light. A good preventive of scurvy when eaten raw with vinegar; its nutritious properties depend chiefly on starch.

Gentianaceæ, *Juss.*—(The Gentian Tribe.)

Gentiana§ Soponaria, *Linn.* (Soap Gentian). G. Quinqueflora, *Laur.* Five-flowered Gentian. G. Crinita, Large fringed Gentian. Pure bitter tonics, fully equal to the imported Gentian, (*Lutea,*) and might be substituted for it; stomachic. In a fresh state they prove laxative. We have three other species, equally medicinal.

Frasera‖ Caroliniensis, *Walt.*, (American Columbo). A good bitter, reported by many as equal to imported Columbo. When re-

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* From the Latin, *convolvo*, to entwine.

† From *John Nicot*, who introduced the weed into Europe.

‡ From *hyos*, a hog, and *cyamos*, a bean, because hogs are said to feed on the fruit, which resembles a bean.

§ From *Gentius*, a king of Illyria, who brought the plant into use.

‖ From *John Fraser*, a collector of North American plants.

cent, it is emetic and cathartic, and operates like rhubarb; when dried, simply tonic. Employed much at the west and south, and kept in the shops. Powder and infusion.

ERYTHRÆA* CENTAURIUM, *Pers.*, (Common Centaury). A pure bitter and tonic, no astringency, and slight aroma.

SABBATIA† ANGULARIS, *Pursh.*, (American Centaury.) An excellent, pure, bitter tonic, without astringency. Two other species, *Stellaris*, (*Pursh*), and *Chloroides*, (*Pursh*), have the same properties.

MENYANTHES‡ TRIFOLIATA, *Linn.*, (Buckbean, Marsh Trefoil). A good tonic, combining laxative and diuretic properties. In small doses astringent. (See *Wood and Bache.*) Said also to be emmenagogue.

APOCYNACEÆ. *Juss.*—(THE DOGBANE TRIBE.)

APOCYNUM§ ANDROSÆMIFOLIUM, *Linn.*, (Dog's Bane). Contains bitter extractive matter, caoutchouc, and vol. oil. *Root*, diaphoretic and emetic, in full doses causes emesis, without previous nausea, or much muscular relaxation. A stimulant to digestive organs in small doses.

A. CANNABINUM, *Linn.* (Indian Hemp). Emeto-cathartic, diuretic, and diaphoretic; produces copious watery evacuations, followed by general perspiration; uncertain as a diuretic, most useful as a hydrogogue in dropsy.

ASCLEPIADACEÆ, *R. Br.*—(THE MILK WEED TRIBE.)

ASCLEPIAS‖ CORNUTI, *Decaisne.* (Silk Weed, Milk Weed). Diuretic, diaphoretic, anodyne and expectorant. The young plants resemble asparagus; the dried leaves are employed in preparing the indigo dye in woollen manufactories.

A. INCARNATA, *Linn.*, (Swamp Silk Weed). The root, emetic and cathartic, also diaphoretic.

A. TUBEROSA, *Linn.*, (Pleurisy Root). Well known from its beautiful orange-colored flowers; a good diaphoretic and expectorant, slightly tonic. In large doses, cathartic. Has been found useful in catarrh, pneumonia, pleurisy and other pectoral complaints; also, in rheumatism and dysentery, in infusion or powder. We have six other species of this genus, all of which possess medicinal properties.

OLEACEÆ, *Hoff.*—(THE OLIVE TRIBE.)

LIGUSTRUM¶ VULGARE, *Linn.*, (Common Privet). The *bark* contains a peculiar substance, *ligustrin*, mannite, starch, sugar, extractive, and tannin, bitter resin, etc. The *berries* are black, are cathartic, and used for dyeing. The *leaves* are astringent, as are the flowers; used in aphthous affections of the mouth and fauces as a wash. (*Am. Jour. Phar.*, XII.—347.)

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* From the Greek, *erythros*, red, the color of the flowers.

† After *L. Sabbati*, an Italian botanist of last century.

‡ From the Greek *mene*, a month, and *ankros*, a flower, in allusion to its emmenagogue virtues.

§ From *apo*, from, and *kyon*, a dog, it being thought poisonous to that animal.

‖ The Greek name of *Æsculapius*, to whom the genus is dedicated.

¶ From the Latin *liguro*, to tie, from its flexibility.

APELATOUS EXOGENOUS PLANTS.

ARISTOLOCHIACEÆ, *Juss.*—(THE BITTERWORT TRIBE.)

ARISTOLOCHIA SERPENTARIA, *Linn.* (Virg. Snake Root). An invaluable diaphoretic, stimulant and tonic. Contains much volatile oil, and a yellow bitter principle; also, diuretic; particularly adapted to cases of typhus fever, and eruptive diseases where the grade of action is low, and the eruption slow in appearing. In powder, infusion or extract. Off. U. S. P.

ASARUM* CANADENSE, *Linn.*, (Wild Ginger, Canada Snake Root). An aromatic, stimulant, tonic, containing a very fragrant essential oil, etc. Forms a pleasant adjuvant to tonic infusions and decoctions; in powder or tincture.

CHENOPODIACEÆ, *Vent.*—(THE GOOSEFOOT TRIBE.)

AMBRINA ANTHELMINTICA, *Spach.* (Worm Seed, Jerusalem Oak). A valuable anthelmintic, well adapted to cases of lumbrici in children, in doses of ℈j. to ʒj, followed by oil. The seeds of the A. *Ambrosioides* (Mexican Tea), is sometimes substituted for the true Worm seed, but the seeds have a weaker odor, and are less offensive. The *oil* is a good form of giving it. These plants would probably prove useful in nervous affections. Formerly *Chenopodium.*†

POLYGONACEÆ, *Juss.*—(THE BUCKWHEAT TRIBE.)

POLYGONUM‡ FAGOPYRUM, *Linn.*, (Buckwheat). Furnishes nutritive seeds, not so nutritive as the cereal grains, containing only half its weight of fecula.

P. HYDROPIPER, *Linn.*, (Smart Weed). Recommended by Dr. Eberle, and others, as a powerful emmenagogue, in form of saturated tincture; also, stimulant and diuretic. (See Eberle's Practice, 4th ed., v. 1, 441.)

P. AVICULARE, *Linn*, (Knot Grass). A mild astringent, formerly employed as a styptic and vulnerary.

We have seventeen species of this genus growing in this state, the leaves of many of which are acrid and pungent, and will vesicate when applied to the skin. They lose this property, however, by drying. The roots of some of these species will probably be found good alteratives. Off. U. S. P.

RUMEX CRISPUS, *Linn.*, (Curled Dock). R. BRITANNICA, *Willd.*, (Yellow-rooted Water Dock). R. OBTUSIFOLIUS, (Broad-leaved Dock). R. VERTICILLATUS, (Long-stalked Water Dock). These species have similar medicinal properties, which are astringent and mild tonic; also alterative and depurative; useful in all chronic cases where sarsapa-

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* From the Greek, *a* not, and *seria*, a band, because it was rejected from the garlands of flowers employed by the ancients.

† From *chenos*, a goose, and *pous*, foot, the leaves resembling the foot of this bird.

‡ From the Greek, *polys*, many, and *gonu*, joint; the stem having numerous joints.

rilla is usually recommended. The *Britannica* is the *Aquaticus*, or Water-Dock of Willdenow. The *Crispus*, and *Obtusifolius* combine laxative with tonic and astringent properties, like rhubarb. The *Crispus* is very useful in decoction or ointment in the treatment of itch, and other cutaneous diseases. The root forms a good dentifrice when the gums are spongy. Decoction best form of administration. The R. *Acetosella* or *Sheep Sorrel*, contains a large quantity of binoxolate of potash, which renders it agreeably acid. Off. U. S. P.

PHYTOLACCACEÆ *R. Br.*—(THE POKE WEED TRIBE.)

PHYTOLACCA* DECANDRA, *Linn.*, (Poke Weed). An acro-narcotic emetic, and purgative; as an emetic its operation is very slow, causing much nausea and distress; in small doses alterative; *tincture* useful in rheumatism. An ointment made of the leaves, is recommended in psora, tinea-capitis, and other cutaneous diseases. (*Am. Jour. of Pharm.* XV. 169). Off. U. S. P.

LAURACEÆ. *Juss.*—(THE CINNAMON TRIBE.)

SASSAFRAS† OFFICINALE, *Nees.*, (Sassafras). The bark and roots aromatic, stimulant, cordial and diaphoretic, used chiefly as an adjuvant to other preparations. Virtues reside in a *volatile oil*; has been recommended in chronic rheumatism, cutaneous eruptions, scorbutic and syphiloid affections. In infusion or oil. Off. U. S. P.

BENZOIN ODORIFERUM, *Nees.*, (Fever-bush, Spice-bush). A very agreeable stimulant, diaphoretic and aromatic tonic, a useful vermifuge, and drink in low fevers. The bush is recommended in intermittents. The oil of the berries is used as a stimulant. The berries have been employed in place of allspice. A decoction of the young branches is often used as a medicinal drink for horned cattle, in the spring of the year.

THYMELACEÆ, *Juss.*—(THE MEZEREUM TRIBE.)

DIRCA‡ PALUSTRIS, *Linn.*, (Leather Wood, Moose Wood). Fresh bark vesicates the skin; the berries are emetic and poisonous. The bark forms a good stimulant masticatory in cases of toothache, &c. In decoction it proves expectorant and sudorific, similar to mezereon in its medical properties. Bigelow thinks it might be substituted for Senega.

ULMACEÆ, *Mirbel.*—(THE ELM TRIBE.)

ULMUS AMERICANA, *Linn*, (White Elm, American Elm).—U. FULVA MICHX., (Slippery Elm, Red Elm.)—U. RACEMOSA, (White Elm).—The inner bark of the Fulva forms an elegant demulcent from its abundant mucilage; also nutritious, and forms a good substitute for *Gum Arabic*. Dr. Griffith recommends it as an alterative in cutaneous diseases; good bougies are formed of its bark. Externally applied as poultices and fomentations to inflamed parts.

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* From the Greek *phyton*, a herb, and *lachanon*, pot-herb, in allusion to the use made of the young herbs.

† From the Spanish *salsafras*, saxifrage, whose virtues have been attributed to this plant.

‡ From the Greek, *dirke*, a fountain, the plant growing near water.

Celtis Occidentalis, *Linn.*, (Sugar-berry, Nettle Tree). The berries sweetish and somewhat astringent; useful in diarrhœa and dysentery.

Euphorbiaceæ, *Juss.*—(The Spurge Tribe.)

Euphorbia Corallata, *Linn.*, (Flowering Spurge). E. Hypericifolia, *Linn.*, (Upright Spotted Spurge). E. Ipecacuanha, *Linn.* (Wild Ipecac). These species all furnish an acrid milky juice; all are emetic and cathartic, but too active for general use. In small doses, they are expectorant and diaphoretic. They cause much nausea and distress as emetics, and are apt to irritate and inflame the stomach. Given in infusion, decoction or powder of the root.—(See Wood & Bache.) Seven species are found in the State.

Juglandaceæ, *De Cand.*—(The Walnut Tree.)

Juglans Nigra, *Linn.*, (Black Walnut). Bark is acrid and styptic, used chiefly for making ink. The rind of the unripe fruit is used to cure ringworm and tetter; decoction as a vermifuge.

J. Cinerea, *Linn.*, (Butternut). The inner bark is a mild and pleasant cathartic, suited to cases of habitual constipation; recommended in dysentery. Barton thinks it anodyne. In decoction or extract the sap affords a laxative sugar. The fruit is used for pickles. The different species of *Carya*, *Hickory*, of which we have four, are worthy of notice, as their bark is astringent and possesses antispasmodic properties.

Cupuliferæ, *Richard.*—(The Nut Tribe.)

Corylus* Americana, *Walt.*, (American Hazlenut). C. Rostrata, *Ait.*, (Beaked Hazlenut). The nut of the latter is of an ovate shape, surrounded by a coriaceous involucre, which is round; short and thick bristles, very similar to those of the *Cowhage*. Dr. Heubener, of Bethlehem, Pa., states that these possess similar anthelmintic virtues with the Cowhage, and equal to it in all respects. Given in molasses or syrup.

Quercus† Tinctoria, Rubra, Palustris, (Pin Oak). Ilicifolia, (Bear Oak, Scrub Oak). Q. Coccinea, (Scarlet Oak). Alba, (White Oak). Bicolor, (Swamp White Oak). Montana, (Rock Chesnut Oak). Prinoides, (Chinquapin Oak), &c. These species, and several others we have not named, (15 in all,) are marked by astringency due to tannin and gallic acid, and have all been employed medicinally. They are all, however, of more use in the arts than in medicine. The *Alba*, (White Oak,) is, perhaps, the most valuable as an internal astringent, and has been used advantageously in hemorrhages, diarrhœa, leucorrhea, gonorrhœa, prolapsus ani, in relaxation of the fauces, and ulcerated throat. Externally, to flabby ulcers, and as a poultice in gangrene and mortification. The *Tinctoria*, (black oak,) contains most tannin and gallic acid; is exported largely for tinctorial purposes, under the name of *Quercitron*. Internally it is more irritating than the

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* From the Greek, *korys*, a helmet or cap, in allusion to the shape of the involucre.

† From the Celtic, *quer*, beautiful, and *cuez*, a tree.

former, but preferable for external use, from its greater astringency.—The other species named can be substituted for this and the preceding, or for each other.

Fagus* Ferruginea, *Ait.*, (Beech). A narcotic principle, called *fagine*, is found in the husks of this species of Beech, and we have but one whose properties have not yet been fully tested.

Castanea† Vesca, *Michx.*, (Chesnut). Valuable for its nuts; and bark for tanning, contains gallic acid and tannin.

Myricaceæ, *L. C. Richard.*—(The Gale Tribe.)

Myrica‡ Cerifera, *Linn.*, (Bayberry Wax Myrtle). The fruit furnishes a wax chiefly of that peculiar ingredient of beeswax called *Myricin*, which is obtained by boiling the berries in water, when it separates and is skimmed from the surface; used for candles, and as the basis of a kind of soap; to purify, melt and strain, and cast into cakes; when it is of a pale, greyish green color; consisting of *cerin* 87, and *myricin* 12 per cent. Used in dysentery. The bark of the root is acrid and astringent, and in large doses emetic; a popular remedy in jaundice. (Amer. Jour. Med. Science, 4, 313.)

Comptonia‖ Asplenifolia, *Ait.*, (Sweet Fern). A popular remedy in dysentery and diarrhœa; it is tonic and astringent, and possesses a resinous spicy odor.

Betulaceæ, *L. C. Rich.*—(The Birch Tribe.)

Betula§ Lenta, *Linn.*, (Cherry Birch, Black Birch). B. Excelsa, *Ait.*, (Yellow Birch.) The fruit of these species is remarkable for its aromatic flavor, resembling that of the *Gaultheria Procumbens;* a tea of it makes a very agreeable diaphoretic stimulating drink. The oil obtained from distilling the bark, is identical with that of the *Gaultheria*, (*Am. Jour. Phar.* xv. 243.) All the species afford a saccharine liqour; we have 6 species of birch.

Alnus¶ Serrulata, *Willd.*, (Common Alder). A very useful alterative and astringent, (see *N. York Jour. Med.* vol. 7 & 8,) leaves bitter and astringent; inner bark of root, emetic; a decoction of the leaves has been much used to suppress hemorrhage; very successful in hematuria; the bark has been found useful in intermittents, and the leaves as an external application in wounds and ulcers; also in dyspepsia and bowel complaints; an excellent tonic and alterative; has cured obstinate cutaneous affections, when all other remedies have failed; also scrofula.

Salicaceæ, *L. C. Rich.*—(The Willow Tribe.)

Salix** Nigra, *Marshall,* (Black Willow). We have 16 known species of Salix in this State, all of which are more or less medicinal, tonic and astringent; most of them contain *Salicine;* the *Nigra*, perhaps,

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* From the Greek *phago*, to eat, because the nuts were used as food.
† From *Castanea*, in Thessaly, celebrated for its chesnut tree.
‡ From the Greek, *myro*, to flow, because found on the banks of rivers.
‖ In honor of *Henry Compton*, Bishop of London.
§ From *batu*, the Celtic name for the birch.
¶ From the Celtic words, *al*, rear, and *lau*, the bank of a river.
** From the Celtic, *sal*, near, and *lis*, water, in allusion to the place of growth

in greatest quantity. The *Salicine* is valuable as a simple bitter, resembling gentian, but as an antiperiodic, it cannot compare with gentian. Quinine is often adulterated with it. Dose 10 to 30 grains.

Populus* Tremuloides, *Michx.*, (American Aspen). The bark has the same medicinal properties as the Salix, tonic and febrifuge.

P. Balsamifera, *Linn.*, (Balsam Poplar, Tackamahac). Cathartic, and useful in gout and rheumatism. The buds are balsamic and aromatic; the juice is collected and used for diuretic and antiscorbutic purposes. An ointment may be prepared from the buds, which is useful in burns, bruises and tumors.

Urticaceæ, *De Cand.*—(The Nettle Tribe.)

Morus† Rubra, *Linn.*, (Red Mulberry). M. Alba, *Linn.*, (White Mulberry). These species of Mulberry bear edible fruits, which are cooling and laxative: bark, anthelmintic and cathartic. The *Alba* furnishes food for the silk worm, and its root is a good vermifuge. The fruit of both species furnishes a grateful drink in fevers. A syrup of mulberries forms a grateful addition to gargles. The *Rubra* is indigenous, the *Alba* from China.

Urtica‡ Dioica, *Linn.*, (Stinging Nettle). U. Urens, *Linn.*, (Small Nettle). The leaves, seeds and roots, diuretic and astringent, formerly much used in jaundice, nephritic complaints, hemorrhages, scurvy, &c., good to excite external irritation in cases of palsy where there is loss of sensation.

Cannabis Sativa, *Linn.*, (Common Hemp). There is but one species of this plant, the *Sativa*, the *C. Indica* being a mere variety. It remains to be ascertained whether the American Hemp contains the same intoxicating and narcotic properties with that of India; we are inclined to think it lacks that resinous portion on which its peculiar medicinal virtues depend.

Humulus§ Lupulus, *Linn.*, (Hop). A well-known tonic and narcotic; owes its properties to a peculiar principle, which resides in the yellow granular matter of the strobiles, called *Lupulin*, diuretic and decidedly antilithic. Lupulin is the best form of internal administration.

CLASS II.—GYMNOSPERMOUS PLANTS.

Coniferæ, *Juss.*—(The Pine Tribe.)

Pinus‖ Rigida, *Mill.*, (Pitch Pine). P. Strobus, *Linn.*, (White Pine). P. Mitis, *Michx*, (Yellow Pine.) P. Balsamea, *Linn.*, (Balsam Fir, Balm of Gilead Fir). P. Canadensis, *Linn.*, (Hemlock Spruce). P. Nigra, *Ait.*, (Black or Double Spruce). P. Alba, *Ait.*, (White or Single Spruce). P. Pendula, *Ait.*, (Tamarack, American Larch). Turpentine and resin are obtained from all the above species in greater or less quantity. The *Rigida* abounds in turpentine; the

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* From *populus*, the people, having been used in ancient times as a shade tree for public walks.

† From the Greek *moron*, the mulberry.

‡ From the Latin *uro*, to burn, from its stinging properties.

§ From *humus*, moist earth, because it prefers damp soils.

‖ From the Celtic, *pin* or *pen*, a rock or crag; in allusion to its usual locality.

Balsamea yields the *Canada Balsam*, which is largely exported for medicinal purposes; 650,000,000 of white pine lumber, (*P. Strobus*,) are supposed to be annually obtained from this State, which require 65,000 acres to produce. The turpentines are all diuretic, stimulant, expectorant; in large doses, purgative and vermifuge. They constitute the best class of alterative remedies in the chronic diseases of old people, and especially of the pulmonary and urinary organs; excellent external applications and revulsives.

Cupressus* Thuyoides, *Linn.*, (White Cedar). An infusion of the tops, stomachic and diuretic.

Thuya Occidentalis, *Linn.*, (Common Arborvita Tree). Stimulant, diuretic, diaphoretic, and vermifuge; decoction of the strobiles is recommended as an astringent in diseases of the bowels.

Juniperus† Virginiana, *Linn.*, (Red Cedar). J. Communis, *Linn.*, (Common Juniper). The first species, *Virginiana*, is probably the J. *Sabina*, (Savine,) of Hooker; the leaves and berries possess the same medicinal properties, which are owing to volatile oil, wax, resin, gum, &c. Both are stimulating diuretics, and decided alteratives in all diseases of mucous membranes; also powerfully emmenagogue and anthelmintic; used as an ointment to promote the discharge from blistered surfaces.

Taxus‡ Canadensis, *Willd*, (American Yew). A resinous tree; the leaves of the European species, *Baccata*, which, according to *Michaux* is identical with the present, are said to act in small doses, like Digitalis in reducing the force of the circulation. We hope trials will be made to test the virtues of this plant. The ancients considered the tree poisonous, especially during the season of flowering.

CLASS III.—ENDOGENOUS, OR MONOCOTYLEDINOUS PLANTS.

Araceæ, *Juss.*—(The Arum Tribe.)

Arisæma Triphyllum, (Indian Turnip). Formerly the *Arum*. The tuber very active when fresh, owing to a volatile, inflammable principle, soluble in water and alcohol. When dry it furnishes a large quantity of nutritious starch, resembling *sago*. When recent, used as a carminative stimulant in flatulent colic, etc. Has some reputation in bronchitis.

Calla Palustris, *Linn.*, (Water Arum). The Rhizomes are acrid and caustic, but on drying, grinding, and washing, furnish a very pure starch, which in the north of Europe is made into palatable bread. Diaphoretic when fresh.

Symplocarpus§ Fœtidus, *Salisb.*, (Skunk Cabbage). Root and seeds, narcotic and stimulant; very acrid when fresh, which is lost by drying. Has been used in asthma, rheumatism, dropsy, hysteria, and chronic catarrh; the leaves to keep up a discharge from a blistered surface.

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* From the Island of *Cyprus*, where the tree abounds.

† From the Celtic, *juneprus*, rough or rude, the character of the genus.

‡ From *toxon*, bow, because the wood was used for that purpose by the Greeks.

§ From the Greek, *sympploke*, connexion, and *karpos*, fruit, the berries being united.

ACORUS* CALAMUS, *Linn.*, (Sweet Flag). A pleasant stimulant, tonic and stomachic. A good adjuvant to bark and quinine in intermittents. Used in flatulent colic and atonic states of digestive organs.

ALISMADEÆ.—(THE WATER PLANTAIN TRIBE.)

ALISMA† PLANTAGO, *Linn.*, (Water Plantain). Acrid, and resembling the Ranunculus in its properties. In Russia it is believed to be an antidote in hydrophobia. The Kalmucks use it as food when dried, as it contains much fecula. Recommended in diseases of urinary organs.

SAGITTARIA‡ SAGITIFOLIA, *Linn.*, (Arrow Head). Has a fleshy rhizome, which is used for food by the Indians; abounds in starch; edible even in the fresh state. Sometimes several inches in diameter.

CYPRIPEDIUM§ PUBESCENS, *Swartz*, (Yellow Lady's Slipper). A very energetic antispasmodic and nervine, nearly equal to Valerian. The root is employed. We have used it in hysteria and other nervous diseases with striking benefit, in the form of powder and infusion. The *Spectabile*, (Showy Lady's Slipper,) and *Acaule*, (Noah's Ark,) have the same properties.

IRIDACEÆ, *Juss.*—(THE IRIS TRIBE.)

IRIS VERSICOLOR, *Linn.*, (Blue Flag). A very certain and mild cathartic; in small doses diuretic, in larger, emetic. As a cathartic, the powdered root is equal to any of our indigenous articles. (See *N. Y. Jour. Med.*, vol. ix.) Fresh root has a sweetish sub-acrid taste, and a faint, disagreeable odor; both nearly dissipated by drying. Take the fresh-dug roots, cut into slices, dry in an oven heated to about 100°, then pulverize, and keep in close-stopped bottles. Dose of powder, as cathartic, 10 to 15 grs. It should be combined with some stimulant, as cayenne, ginger, or myrrh. These prevent nausea and griping. It operates as a mild yet effectual cathartic, producing copious discharges well tinged with bile. An alterative in smaller doses, 2 to 4 grs. Considered by some equal to jalap, and might be substituted for it in some cases.

SMILACEÆ, *R. Brown.*—(THE SMILAX TRIBE.)

TRILLIUM‖ CERNUUM, *Linn.*, (Nodding Three-leaved Night Shade, Birth Root, or Birth-wort). T. ERECTUM, *Linn.*, (False Wake Robin). T. GRANDIFLORUM, *Salisb.*, (Large-flowered Trillium). All these species are medicinal, possessing alterative, tonic and astringent virtues. The fresh roots have an aromatic taste, and the odor of turpentine, causing an acrid sensation in the mouth. They are much used in hemorrhagic cases, and with benefit by botanic doctors, and in domestic practice. I found the Indians on Lake Superior (1846) using the root of the *Cernuum* to facilitate child-birth; it is in common use among them for this purpose, as well as for all kinds of discharges in females. This plant deserves farther investigation.

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* From the Greek, *a*, without, and *kore*, the pupil of the eye, having been used for sore eyes.

† From the Celtic, *alis*, water, its place of growth.

‡ From the Latin, *sagitta*, arrow, the shape of the leaf.

§ From the Greek, *Kypris*, Venus, and *podeon*, a shoe—*i. e.*, the slipper of Venus.

‖ From the Latin, *triplix*, triple, most parts of the plant being in threes.

Smilacina Racemosa, *Desf.*, (Wild Spikenard). A mild alterative, diuretic, and diaphoretic.

Polygonatum Multiflorum, (Solomon's Seal). Deobstruent, and slightly astringent. Deserves investigating.

Smilax* Rotundifolia, *Linn.*, (Green Briar). S. Hispida, *Muhl.*, (Hispid Green Briar). S. Spinulosa, *Smith*, (Spinulose Green Briar). S. Herbacea, *Linn.*, (Carrion Flower). All these species of Green Briar are believed to possess alterative and diaphoretic properties, and are mentioned for the purpose of directing further attention to them.

Liliaceæ, *Juss.*—(The Lily Tribe.)

Lilium† Philadelphicum, *Linn.*, (Red Lily). L. Canadense, *Linn.*, (Wild Yellow Lily). L. Superbum, *Linn.*, (Turk's Cap). The roots, or bulbs, contain much mucilage, are slightly acrid; the active principle is volatile; used in domestic practice in dropsy and to form emollient cataplasms, boiled in milk. An ointment is also prepared from the flowers, which has soothing properties.

Erythronium‡ Americanum, *Arn.*, (Dog's Tooth Violet). The recent root emetic, in doses of 20 to 30 grs. When cooked, the bulbs are edible. The leaves are more active than the roots. Dr. Bigelow supposes that this plant might supply the place of *Colchicum*. In domestic practice the leaves and roots are used as an application to scrofulous sores, for which purpose they are boiled in milk.

Allium§ Canadense, *Kalm*, (Meadow Garlic). A. Vineale, *Linn.*, (Wild Garlic). A. Triococcum, *Ait.*, (Wild Leek). A. Cernuum, *Rath.*, (Wild Onion). All contain a volatile, acrid oil, which render the bulbs, in a fresh state, rubefacient and revulsive. Internally they prove expectorant, diuretic, and diaphoretic, like squills. The species *Canadense*, is fully as active as the cultivated garlic, and may be substituted for it. The onion, *A. Cepa*, possesses similar properties, but much milder.

Aletris Farinosa, *Linn.*, (Star Grass, Colic Root, Blazing Star, Ague Root, etc.). The root contains a very bitter resinous principle, soluble in alcohol, slightly in water. Tonic, and stomachic, emetic and cathartic, slightly narcotic. Dose of powder, 10 grs. A popular remedy in colic, dropsy, and rheumatism.

Melanthaceæ, *R. Brown.*—(The Colchicum Tribe.)

Veratrum‖ Viride, (White Hellebore, Indian Poke). The *root*—this contains *veratria*, in the form of a *super gallate; fatty-matter*, containing a volatile acid; *extractive*, and a principle called *jervin*, crystallizable, (*Griffith*). An acid irritant hydragogue cathartic and emetic. In small doses alterative and deobstruent. Useful in gout, rheumatism; and extract, as an ointment, in cutaneous diseases; decoction for destroying vermin, etc.

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* From the Greek *smile*, a grater, from its being rough with prickles.
† From the Celtic *li*, white, that being the color of one of the principal species.
‡ From the Greek *erythias*, red, from the spots on the leaves.
§ From the Celtic word *all*, signifying hot, or acrid.
‖ From the Latin *vere atrum*, truly black, in allusion to the color of the root.

Helonius Dioica, *Pursh*, (Unicorn Plant). The root, a popular tonic and anthelmintic. The tincture is a good stomachic and alterative.

Filices, *R. Brown.*—(The Fern Tribe.)

Polypodium* Vulgare, *var.* Americanum, *Hook.* (Common Polypody). We have four species of Polypod. possessing slight medicinal properties. The *rhizome*, diuretic and expectorant; when dried, the root is bitter; formerly much used as a purgative in obstructions of the liver. The *P. filix-mas* is not found in the State.

Adiantum Pedatum, *Linn.*, (Maidenhair). Demulcent and pectoral; forms a mild expectorant syrup, (*Capillaire*,) and a vehicle for administering other remedies.

These two species are allied, but easily distinguished. There is no doubt but that both possess the same medicinal properties. The *Aspidium filix-mas* has been mistaken by several other American botanists besides Pursh, but they have mistaken for it the *A. goldianum*, or *A. dilatatum*.

Aspidium Goldianum, *Hook.* (Goldie's Shield Fern). This is the *A. filix-mas* of Pursh, *Polypodium filix-mas* of *Linn.*; it is not found in North America. We have several species of *Lycopodium* possessing medicinal properties, which have not yet been investigated.

Such are some of the articles composing the Materia Medica of the State of New-York; but they by no means embrace all. Under this head might be ranked the various cultivated cereals, the invaluable *Zea*, (Indian corn,) the *Avena*, (oat,) *Triticum*, (wheat,) *Hordeum*, (barley,) *Secale*, (rye). The sugar of the maple has medicinal properties of no little value. The *Fuci*, (sea-weeds,) furnish soda, as well as iodine, in any quantity, a very important article in medicine. Some of this class, as the *Alaria esculenta* of Great Britain, will also be found edible, and mucilaginous, like *Chondrus crispus*. Our *Fungi* have been as yet very imperfectly investigated, but it is well known that we have a considerable number that are wholesome and edible; while a still larger number are poisonous; and we have no means of distinguishing them, except actual experience. Griffith states that the same species may be wholesome or poisonous, according to circumstances. The secale cornutum deserves mention, as an important agent in the list of our materia medica; as do also some of our *lichens*, possessing both alimentary and medicinal properties. It will probably be found that we have some not far inferior in these respects to the *Cetraria islandica*, (Iceland Moss,) or the *Gyrophora proboscidia*, (Tripe de Roche,) of the artic regions. These still remain to be investigated, and furnish a wide field for the cultivators of this department of Medical science.

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* From the Greek, *polys*, many, and *pous*, foot, in allusion to the feet-like branches of the root.

NATURAL ORDERS,

CONTAINING MEDICINAL PLANTS.

	No. of Species.		No. of Species.
1. Ranunculaceæ,	38	40. Ebenaceæ,	1
2. Magnoliaceæ,	3	41. Plantaginaceæ,	6
3. Anonaciæ,	1	42. Plumbaginaceæ,	1
4. Berberidaceæ,	4	43. Orobanchaceæ,	3
5. Nympheaceæ,	3	44. Bignoniaceæ,	1
6. Papavaraceæ,	2	45. Scrophulariaceæ,	38
7. Fumariaceæ,	7	46. Verbenaceæ,	5
8. Cruciferæ,	31	47. Labiatæ,	45
9. Violaceæ,	16	48. Boraginaceæ,	14
10. Hypericaceæ,	10	49. Solanaceæ	8
11. Caryophyllaceæ,	25	50. Gentianaceæ,	16
12. Malvaceæ,	8	51. Apocynaceæ	2
13. Linaceæ,	2	52. Asclepiadaceæ,	10
14. Geraniaceæ,	5	53. Oleaceæ,	4
15. Oxalidaceæ,	3	54. Aristolochiaceæ,	2
16. Balsaminaceæ,	1	55. Chenopodiaceæ,	17
17. Anacardiaceæ,	6	56. Polygonaceæ,	22
18. Xanthoxylaceæ,	2	57. Phytolaccaceæ,	1
19. Hippocastinaceæ,	1	58. Lauraceæ,	2
20. Celastraceæ,	4	59. Thymelaceæ,	1
21. Rhamnaceæ,	4	60. Ulmaceæ,	4
22. Vitaceæ,	5	61. Euphorbiaceæ,	8
23. Polygalaceæ,	7	62. Juglandiaceæ,	6
24. Leguminosæ,	59	63. Cupuliferæ,	22
25. Rosaceæ,	51	64. Myricaceæ,	3
26. Lythraceæ,	5	65. Betulaceæ,	9
27. Onagraceæ,	24	66. Salicaceæ,	25
28. Saxifragaceæ,	8	67. Urticaceæ,	10
29. Hamamelidaceæ,	1	68. Coniferæ,	14
30. Umbelliferæ,	30	69. Araceæ,	7
31. Araliaceæ,	5	70. Alismaceæ,	7
32. Cabombaceæ,	1	71. Iridaceæ,	3
33. Caprifoliaceæ,	24	72. Smilaceæ,	14
34. Compositæ,	160	73. Liliaceæ,	12
35. Rubiaceæ,	13	74. Melanthaceæ,	10
36. Valerianaceæ,	2	75. Filices,	41
37. Lobeliaceæ,	7		
38. Ericaceæ,	42	Total,	1020
39. Aquifoliaceæ,	6		

NATURAL ORDERS,

CONTAINING NON-MEDICINAL PLANTS.

	No. of Species.		No. of Species.
1. Menispermaceæ,	1	28. Amaranthaceæ,	4
2. Nelumbiaceæ,	1	29. Santalaceæ,	2
3. Saraceniaceæ,	1	30. Eleagnaceæ,	1
4. Capparidaceæ,	1	31. Laururaceæ,	1
5. Cistaceæ,	6	32. Cerotophyllaceæ,	1
6. Droseraceæ,	4	33. Callitrichaceæ,	1
7. Elatynaceæ,	1	34. Podostomaceæ,	1
8. Illecibraceæ,	4	35. Empetraceæ,	2
9. Portulaccaceæ,	3	36. Balsamifluæ,	2
10. Tiliaceæ,	1	37. Platanaceæ,	1
11. Limnanthaceæ,	1	38. Linaceæ,	2
12. Aceraceæ,	5	39. Typhaceæ,	4
13. Melastomaceæ,	1	40. Naiadaceæ,	13
14. Cactaceæ,	1	41. Hydrochardaceæ,	3
15. Grossulaceæ,	5	42. Orchidaceæ,	38
16. Cucurbitaceæ,	2	43. Hypoxidaceæ,	1
17. Crassulaceæ,	4	44. Dioscoreaceæ,	1
18. Dipsaceæ,	1	45. Pontederiaceæ,	3
19. Campanulaceæ,	4	46. Juncaceæ,	18
20. Primulaceæ,	11	47. Corumelynaceæ,	2
21. Lentibulaceæ,	2	48. Xyridaceæ,	1
22. Acanthaceæ,	1	49. Eriocaulonaceæ,	1
23. Pedaliaceæ,	1	50. Cyperaceæ,	159
24. Hydrophyllaceæ,	3	51. Graminæ,	124
25. Polemoniaceæ,	3		
26. Diapensiaceæ,	1	Total,	462
27. Convolvulaceæ,	7		

We thus have SEVENTY-FIVE NATURAL ORDERS, containing medicinal plants, including 1020 species, a part of which only are yet known to possess remedial properties. We have also FIFTY-ONE ORDERS, which include no very active medicinal plants, embracing 462 species. Many of these, however, as the Grass and Cypress tribe, embrace genera of a medicinal character.

ART. II.—*Experiments to prove that the Capillaries of the Lungs do not Anastomose.* By G. P. CAMMANN, M. D.

As it is still a question among anatomists,* whether the Pulmonary Capillaries do or do not Anastomose, the following experiments may not be without their value.

Experiment 1. We injected water colored with gamboge into a branch of the pulmonary artery going to a section of lung, and found that a defined portion became moderately distended with the fluid; the water then commenced flowing from the accompanying bronchus and vein. The latter being secured by ligature, we continued to force in

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* Reisseissen, Marshall Hall, and others.

the injection, until this portion of lung became very tense. The injection continued confined to the same original extent of lung; the surrounding parts remained perfectly flaccid, and not a drop of the fluid escaped from any of the bronchi or veins.

Exper. 2. A similar injection was forced into a branch of the pulmonary vein. The fluid flowed only from the accompanying bronchus and artery. (The injection entered with such facility as to show that its course was not interrupted by any valves.)

Exper. 3. We moderately inflated a section of lung through a bronchial tube and secured it by ligature. The accompanying pulmonary artery was then injected, and it was found that the injection extended exactly as far as the inflated portion of lung, following closely the indentations so marked at the boundaries of the bronchial ramifications; the surrounding parts remaining flaccid.

Exper. 4. We substituted the vein for the artery with similar results.

Having, to our entire satisfaction, repeated the above experiments a number of times, we proceeded from the larger arteries and veins to the more minute; gradually approaching the periphery or free border of the lung, and at each advance necessarily including a smaller section. We found in these experiments, as in the former, that the injection of colored water remained confined to the ramifications of the artery or vein under examination, and did not interfere with the neighboring branches. We thus pursued the arteries and veins until they became so minute that it was impossible to insert the finest tube. In other words, we approached so near the terminal branches as to inject only a lobule or a part of a lobule.

To confirm the preceding experiments, and place the matter beyond doubt, we had recourse to another series.

Exper. 5. We injected a moderately-sized pulmonary artery with a strong solution of tartaric acid, and continued to fill the vessel, until from the accompanying bronchus and vein there streamed out a fluid which, when tested with bicarbonate of soda, proved to be the acid.

Exper. 6. Having previously secured by ligature the accompanying bronchus and vein, we injected a branch of the pulmonary artery with the acid solution, until the portion of lung to which it was distributed became distended and tense. We then, in a similar manner, injected an adjoining branch of the artery with a strong solution of the bicarbonate of soda, and applied force almost sufficient to rupture the tissue. The two solutions were apparently in close contact, yet not the least chemical action ensued, although we kept the vessels thus distended until we were apprehensive that the chemicals acting through the tissues might lead into error. Neither in this nor in the former experiment did any liquid come from the neighboring vessels.

Exper. 7. When the two solutions were injected successively into the artery and vein accompanying the same bronchus, the lung was rent in every direction by the disengaged carbonic acid.

Exper. 8. We pursued our investigations from the larger branches of the pulmonary vessels to the more minute, and carried them down as far as practicable.

If anastomosis of the capillaries had existed, the effervescence from the soda and acid would have burst the pulmonary tissues as in experiment 7.

As the preparations from the above experiments were of a perishable nature, we injected sections of lung with mucilage of gum Arabic colored with indigo, and then suspended them in alcohol. The injection passed only to the lobule or lobules to which the vessel was distributed. We possess many of these preparations, in which portions of lung have been injected, the intermediate spaces being entirely free. The surrounding lung remained perfectly flaccid and free from discoloration, even when a degree of force was employed sufficient to rupture the capillaries and form collections of injections either in the substance of the tissue or beneath the pleura. A distinguished pathologist observed this, on submitting sections of the lung to a powerful microscope. So perfectly distinct were the lines of demarcation between the injected and uninjected portion of lung, that we could readily dissect the one from the other, without causing the least escape of fluid. These preparations strikingly illustrate the perfect fidelity with which the experiments had been performed.

In performing these experiments, certain precautions were necessary to ensure success. 1. While cutting off the piece of lung for experiment, care was taken not to draw down the edges, lest the vessels to be injected should be on the apex of a cone, as the terminations of some of the lateral vessels might thus be above the incision. 2. The piece of lung was so held that the colored water flowing from the accompanying bronchus and vein could not run into the neighboring vessels. 3. The surface of the cut lung was wiped so dry that any oozing of fluid could be detected. 4. The injection was passed in very slowly, in order that none of the capillaries or tissues might be ruptured. The liquid was entered rather faster than it flowed from the accompanying vessels. 5. The bronchus and vein were not closed too soon, lest the air, which was, in some cases, forced before the injection, might rupture the capillaries. 6. On approaching as near as possible the periphery of the lung, and after inserting the tube, by compressing with spring-forceps some of the branches of the vessels under examination, a very small portion of a lobule could be injected. 7. In the small lobes of the lungs of the sheep, where the vein runs superficially for an inch or two, it afforded great satisfaction to observe the colored injection as it returned by the vein, and which continued to flow for some time before it escaped from the accompanying bronchus, proving that it must have passed through the capillaries; and if there had been any communication with the neighboring capillaries, they would have become distended. 8. The warmest weather of summer was found to be the best season for making experiments and preparations. At this time of the year the lungs retain their elasticity, whereas they become dry and do not freely accommodate themselves to the injection after being hardened by a reduction of temperature and then subjected to artificial heat.

We have thus ascertained that there is no anastomosis of the capillaries of one branch of an artery or vein, however minute, with the capillaries of any other branch in the pulmonary circulation; or in other words, that the capillaries of each minute branch of an artery or vein are perfectly isolated and independent of any other capillaries for a collateral supply of blood. We hold it, then, as proved, that there is no anastomosis between the capillaries of one lobule with that of another, nor, as far as analogy will warrant, between the capillaries of one minute or terminal artery with those of another. If any additional

confirmation were required, it might be furnished by an examination of the preparations, when it could be seen that the interstitial cellular membrane, even of the most minute lobules, remains perfectly free from any discoloration from the injection.

If we allow the structure of the pulmonary blood-vessels to be as it is generally supposed, and the anastomosis of their capillaries to be as intimate as Dr. Marshall Hall and others describe, we would expect that almost every case of profuse hæmoptysis from pulmonary apoplexy, congestion, or any other cause, must necessarily prove fatal,* from the continual action of the lungs pumping, as it were, the blood from the vessels so easily supplied by the very numerous and freely-communicating capillaries, and from the difficulties which would thus be presented to the formation of coagula. Now, we know, on the contrary, that immediate danger is comparatively slight, notwithstanding, as stated by Bichat, and verified by others, that the lungs, especially when inflamed, are more frequently than any other organs, flooded with an immense quantity of blood. Bichat well says, "Voyez le poumon d'un péripneumonique ; en le fendant vous diriez au premier coup d'œil, que ce sont les solides qui y sont augmentés, il a souvent comme l'aspect du foie dans la masse pesante qu'il représente ; mais mettez-le macérer, bientôt tout s'echappera en fluides. Or, examinez comparativement la peau, l'estomac, le foie, les reins, etc., devenus le siége d'une inflammation aiguë qui a fait succomber le sujet ; ils ne présentent rien d'approchant de ce surcroit énorme de fluid dont le poumon inflammé dans sa substance est surchargé." Again ; what prevents the occurrence of exhausting hemorrhage when there are abscesses and excavations in the lungs, surrounded by perfectly healthy structure, without even the intervention of false membrane? According to Baillie, this is "principally the case when the abscesses are small and placed at a considerable distance from each other." Yet, even then, we would suppose that the blood would be continually forced out into the cavity by the action of the lungs, while the free communication of the capillaries would furnish an ample supply. The preceding remarks are also applicable to an excavation from pulmonary gangrene ; for, as Andral says, "the parietes of this cavity are, in general, not lined by any false membrane ; the pulmonary parenchyma which surrounds it is in some cases perfectly healthy."

In the pathological conditions of the lungs there are appearances which are very peculiar, viz. : the abrupt and perfectly-defined margin that frequently exists between the healthy and diseased parts. These singular boundaries, as if marked out with a pencil, are found in no other organ, except, perhaps, in the brain. In inflammation, or as the effects of inflammation, in other organs, the surrounding tissue is involved ; and as we recede from the point of most active disease, the remote parts are less affected, but there are no lines of demarcation ;—indeed, we can scarcely pronounce where a healthy condition commences, whereas, in very many of the diseases of the lungs, the separation between the morbid and healthy parts is perfectly defined, as has been remarked by every pathologist. Addison says, that, "especially in certain atonic forms of pneumonia, these changes are confined to in-

* We would certainly anticipate such a result, when it is remembered with what facility the injections entered the bronchi.

dividual lobules, more or less remote from each other, the common cellular membrane forms a distinct boundary to the inflammation." Grisolle speaks of isolated lobules being the seat of pneumonia; and Andral alludes continually to this disease as being circumscribed. With respect to pulmonary apoplexy, Laennec observes, that "it is always very exactly circumscribed, the induration being as considerable at the point of termination as in the centre. The pulmonary tissue around is quite sound and crepitous." Andral makes the same remark. He also, in his Clin. Méd., has very interesting observations and facts upon the lobular nature of tubercles, but they are too long to be transcribed.

The experiments of Dr. Marshall Hall on the batrachia, will not apply to warm-blooded animals. In Roget's Animal and Vegetable Physiology, it is beautifully shown how, as we ascend from the lower order in the scale of beings to the most perfectly organized, the pulmonary structure materially varies, so that analogy will not hold good between the different orders of beings. He observes, that in the frog a limited portion only of the blood thrown out from the heart goes to the lungs, so that any inconvenience from intimate communication of the capillaries is prevented; and proceeds to show the perfect and well-developed structure of the lungs of the mammalia. He states, also, that the torpid and cold-blooded reptiles are separated from the mammalia by a very wide interval; for though the former respire air, that air influences but a part of the blood, as the pulmonary is only a branch of the general circulation.

It is allowed by the best anatomists and physiologists, that the capillaries are differently arranged in each organ, being so modified as to accommodate themselves to the tissues through which they ramify. Bichat considers it certain that their distribution and formation differ in the tendons, aponeuroses, muscles, etc.

If we admit that there is no anastomosis between the capillaries of the lungs, we can satisfactorily explain many points in the physiology and pathology of the pulmonary organs. 1. We can easily perceive how, in pulmonary hemorrhage, the arterioles or capillaries, having no collateral supply of blood to instantly rush in and keep them distended, readily contract, and allow the formation of coagula, which effectively prevent excessive loss of blood. 2. We can explain why, in small abscesses where there is not a false membrane between the parietes and healthy structure, there is not a continual flow of blood into the cavity, for as the capillaries discharge themselves they shrink; although in large cavities where, from extent of surface, an exhausting hemorrhage might occur, nature provides a false membrane. 3. We can read understandingly the facts recorded by Bayle, Laennec, Andral, Barth, and indeed by all correct and skilful pathologists. We understand why pulmonary inflammation, congestion, apoplexy, gangrene, etc., are so exactly circumscribed and defined; and why in inflammation we do not, as in other tissues, always observe a gradation in the degree of engorgement, as we recede from the centre of disease. We find the correctness of Andral, when he describes inflammation as attacking isolated points of the pulmonary tissue; and when he speaks of even vesicular pneumonia, of which Grisolle observes, that 'Billiet and Barthez seem to show that this lesion, described by Andral, is only vesicular bronchitis, in which a portion only of the pulmonary vesicles are inflamed and distended with puriform fluid.' We see reasons for

Andral's statement, that "even in those parts where the hepatization seems most perfect, it rarely happens that some small bronchial tube may not be found still permeable to air; and we sometimes find, that when the lobe of a lung which appeared uniformly hepatized throughout, is dried and carefully examined, we can discover some capillary tubes and air-cells which, instead of having their calibre diminished, are very considerably dilated, and are at the same time free from any appearance of congestion." 4. We can understand when we turn to physical signs, why the crepitous râle is so frequently accompanied by the respiratory murmur. We also ascertain why crepitous râle without respiratory murmur, shows very considerable engorgement; and when respiratory murmur is present, much of the lung is still healthy. We likewise advance a step towards an explanation of lobular pneumonia in children, and account for the frequent relapse and only apparent convalescence in pulmonary inflammation, from small lobules and vesicles remaining in a condition of active disease, after all physical and rational signs of functional derangement have disappeared. Finally, we comprehend the cause of the following phenomena observed by Stokes. "I have frequently seen," says he, "all the signs of solidification subside within two days, and have even observed great modifications in the course of a few hours. **** On this subject more extensive observation is wanting."

We have thus demonstrated how, by being composed of an aggregate of isolated portions, the lungs are protected from the extension of disease; and how, but for this safeguard of nature, organs so essential to existence would be more liable to permanent injury, when a portion of their tissue is incapable of performing its functions.

ART. III.—*Some Physiological Evidences of the Curability of Tubercular Consumption.* By WM. A. McDOWELL, M. D.

To establish the cure of any internal disorder of doubtful curability, is difficult—doubt as to accuracy in diagnosis of such cases being always admissible. The difficulty is materially increased when the disease in question presents symptoms so similar to those of other curable diseases, as to render mistakes in the diagnosis easily conceivable.

The *symptoms* of consumption, in many cases, are not at all distinguishable from those of several other disorders of the lungs. An assured diagnosis in such cases, therefore, from symptomatology alone, is impossible; and even with the aid of skilful auscultation, the true character sometimes remains in doubt. The ordinary evidences of cures in other diseases are, therefore, inconclusive and unsatisfactory when applied to tubercular consumption; and hence, the futility of reference to experience on the citation of cases cured is manifest. It assuredly would be more rational to question the diagnostic capacity of any practitioner, than to conclude on such evidence, that he had accomplished that which had baffled the skill of ages.

In the following observations, the writer, for the above reasons, will rely in no degree on cases treated, nor upon his personal observations; but, relying only upon the pathological developments made by others, he expects to prove—to the satisfaction of any physician who has kept

pace with the progress of modern pathology—that tubercular consumption, from *its nature*, is necessarily a curative disorder.

Tubercular consumption consists essentially in an accumulation of albuminous matter in the tissues of the lungs, in the form of tubercles or tumors.

Chemical analysis of tubercles presents in their composition a remarkably pure specimen of albumen, identical with the albumen of the egg, the albumen of the blood, and with nearly one-half of the organized tissues of the human body—the skin, the vascular, and the cellular tissues being constituted principally from this material. Nor are tubercles restricted in their location to the structures of the lungs, but have been detected, more or less frequently, in every tissue of the human body, and are common to all animals.

The cure of such a disorder must necessarily consist in the removal of the morbid deposit out of the tissues in which it had been lodged, and in changing the morbid condition in the body which caused it to be deposited. This leads to the following inquiries:

First. What is the source of tubercles, and what condition of the solids or fluids of the body is pre-requisite to their origin and growth?

Second. Are tuberculous deposits removable? If so, by what processes?

Third. What are our therapeutical resources for promoting the removal of the tubercles?

First. What is the source of tubercles, and what condition of the solids or fluids of the body is pre-requisite to their origin and growth?

We find in the composition of the blood a large proximate principle, (the albumen,) which is identical, both physically and chemically, with tuberculous matter. This leaves the source of tubercles scarcely questionable; and as we are aware of no growth whatever within the tissues of the body, the nourishment of which physiologists ascribe to any other source than the blood, the *origin* and *growth* of tubercles would seem necessarily attributable to morbid deposition of the albumen of the blood in the solid tissues, by process of effusion, or of secretion.

In the further investigation of this branch of our subject, we must have reference to the various conditions of the blood in health and in disease. In health, the blood, when coagulated, presents the appearance of a little more clot than serum. The clot is composed of two parts, the red globules and the fibrine; the serum is composed of albumen, water, and mineral matters. In diseased conditions, the relative proportions of these constituents are exceedingly variable; the globules being sometimes greatly in excess, and at others exceedingly deficient. The serum, in dropsical cases, has been found so excessive as to render the blood nearly destitute of color: "justifying the common expression," says Andral, "of blood turned to water."* We sometimes find the serum so viscid as to be almost as glutinous as the albumen of an egg, and again, so watery that it might serve to wash and cleanse the fingers; each variation, doubtless, indicating a corresponding morbid condition. But such deviations are often too minute to produce a perceptibly-diseased condition of the body, and hence the difficulty of

* Andral's Morbid Anatomy.

establishing a standard-healthy composition of the blood. The difficulty consists in finding a perfectly healthy subject. Such subject, Mr. Abernethy is said to have declared to his class, was not to be found in the city of London! and hence nearly all the chemists, who have analyzed what they considered healthy blood, present somewhat different results. Of these various results, the following is an average, from some of the highest authorities on the subject:

In 1000 parts of healthy blood, the dry clot is composed of	
Fibrine,	3
Globules,	127
The serum is composed of	
Albumen,	68
Water,	790
Saline matters,	12
	1000

The fibrine is recognized to be chemically identical with the albumen of the blood; or, in other words, is a portion of the serous albumen, which, by having become more perfectly organized, is susceptible of spontaneous coagulation. One hundred and twenty-five parts (of the 127 the nuclei) of the globules are solid albumen; the other two (the capsules) are chiefly peroxide of iron. Hence it is manifest, that the actual is much greater than the apparent proportion of albumen, and that the simple principles of the blood are almost exclusively albumen, water, and mineral ingredients.

The diseased conditions in which the globules are found to be most excessive, are apoplexy and scurvy—dropsy and tubercular consumption exhibit its most serous condition.

In the three first-named diseases, apoplexy, scurvy, and dropsy, the tendency of effusion of the excessive ingredient is matter of general notoriety and common observation. Whether this is merely in accordance with the ordinary laws of chemical affinity, in which the abstraction or excess of one ingredient is sometimes observed to cause the separation of another; or, is in consequence of an effort of nature to restore an equilibrium in the blood, by ejecting the excessive ingredient, (its unnatural proportion having rendered it an irritant instead of a healthy stimulant,) is not material to the present inquiry. The fact that effusion does occur, and that the effused matter is that ingredient which pathologists have constantly found to be in excess, only, is important.

In apoplexy, every observer has constantly found globules to be greatly in excess, and fibrine deficient. In seven cases examined by M. Andral, this excess was discovered in them all. "In one of them, the proportion of fibrine had fallen to 1-9th, while that of the globules had risen as high as 175. A few days after, the symptoms were more favorable, and a second venesection was practised." Fibrine was now 3, globules 137.*

In scurvy, the blood has been found, according to the best authorities on the subject,† to contain the greatest known excess of globules

* Andral on changes of the blood in hemorrhage.

† Messrs. Eltie and Allen, surgeons to Lord Anson on his celebrated expedition. Thomas, Eberle, M. Monde, MM. Andral and Gavarret.

and a deficiency of albumen, often not containing a sufficiency of this to cement the globules into a clot, but presenting a dark, loose, flabby mass. In this disease, we have effusions of red blood globules from the gums, nose, lungs, etc., and also into the cellular tissues of the body, exhibiting large black and greenish blotches under the skin, upon the extremities, and sometimes upon various other parts of the body.

"M. Gavarret and I," says Andral, "have ascertained, that the blood of scorbutic patients, whose skin was covered with large ecchymoses, had not more than a third part of the natural quantity of fibrine; and we have found that the natural tendency to hemorrhages is just in proportion to the amount of the deficiency of this element in the blood."*

In dropsy, the blood is sometimes so excessively serous as to be nearly destitute of color, justifying the common expression of "watery blood," "blood turned into water," etc. The effusion of water into the tissues and cavities of the body constitutes this disease.

In consumption, the blood is constantly observed to be too serous; excessive in fibrine, and deficient in globules; this deficiency is, indeed, discoverable in the pallid face. Whether or not this serous blood abounds in any but the fibrinous portions of the albumen, we have not the assurance of the high authority above quoted; but we have this and other equally good authority for the valuable fact that the condition of the blood in this disorder is precisely the reverse of its condition in scurvy.

None of the most distinguished pathologists of the day, in their examinations of the blood, seem to have given any special attention to the condition of the albumen of the serum; but all concur in the important representation, *that in consumption the globules are deficient and the fibrine excessive, and that in scurvy exactly the reverse of this occurs.* The researches of MM. Andral and Gavarret show, that in consumption the fibrine is always abnormally increased, while the globules are as constantly diminished, and that these disproportions keep pace with the progress and intensity of the disease. "In phthisis," says M. Mounnet, "when tubercles are crude, the increase of fibrine is scarcely appreciable; when they begin to soften, it is more marked; at length, when vomica are formed, the proportion of this element sometimes rises to 6 parts in the 1000. The red globules, on the other hand, follow the very opposite direction; their decrease is progressive from the commencement to the close of the disease—the difference often exceeds twenty parts."

These and other authorities touch upon no other portion of the albumen but the fibrine, that part of it which has become susceptible of spontaneous coagulation, and which chemical analysis has shown to differ in no other respect but this from the albumen of the serum, nor when in the blood-vessels do they manifest any physical difference, being equally fluid. The fact that albumen of the serum is frequently in excess in the blood, the best authorities fully attest; but the diseased condition of the body in which this was remarked, none of the most distinguished have adverted to.

The question now arises, whether the *effusion* of the excessive con-

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* Andral's Epistle to Prof. Forgit.

stituent, in cases of apoplexy, scurvy and dropsy, warrants the hypothesis of an analogous albuminous effusion, in cases of excess of *this constituent*. In support of this hypothesis, we have the following analysis, exhibiting the chemical identity of tuberculous matter with the albumen of the blood.

In the result of the analysis of tubercle, chemists differ as to the proportions of the constituent ingredients, as well as in those of the blood. Hecht's analysis of tubercle exhibits nearly equal parts of albumen, fibrine,* and gelatine—in other words, two-thirds albumen.

Thenard's analysis about 98 per cent. albumen, and 2 per cent. of calcareous matter.

The average would be something like the following:

Albumen, ...	82 per cent.
Gelatine, mucous extractive matter, etc.	16
Calcareous matter, ...	2
	100

Dr. Marcet's analysis of serum of the blood exhibits in 1000 parts,

Water, ...	900·00
Albumen, ...	86·00
Muriates of potash and soda, . . .	6·60
Mucous extractive matter, . . .	4·00
Sub-carbonate of soda, ...	1·65
Sulphate of potash, ...	0·35
Earthy Phosphates, ...	0·60

Which, deprived of its 900 parts water, exhibits of solid matter,

Albumen, ...	86 per cent.
Mucous extractive matter, ...	4
Saline matters, ...	10
	100

This shows that the analysis of the solid parts of serum differ much less essentially from that of tubercle, than different analyses of blood, or even of serum itself, often do from each other.

Here, then, we find a natural source for tuberculous matter, which pervades every part of the body, and is common to all animals. And reference being had to the analogy of other more familiar diseases, the inference is strong that the origin and growth of tubercles are the result either of effusion or of secretion of albumen into the solid tissues; and that consumption, like dropsy, is of serous origin; consumption being the result of a degeneration and effusion, or morbid secretion, of one constituent of the serum, dropsy of the other—the one the result of an albuminous, the other of an aqueous effusion.

Either of these effusions, the aqueous or the albuminous, jointly or separately, and either in the form of dropsy or tubercles, may occur under various bodily diseases, and even without appreciable disorder of any of the solid tissues or organs, showing in such cases the disease to be solely consequent on the condition of the fluids. Experimentalists have produced dropsy in healthy animals, simply by gradual and continued in-

* Hecht's analysis preceded the discovery of the chemical identity of fibrine and albumen of the serum.

jections of water into their veins. The surcharge presently comes to be effused into the tissues of the body to the production of a general dropsy.

Dropsical effusion rarely consists of water alone, but is generally in combination with an ingredient susceptible of coagulation, thereby manifesting the presence of albumen. Water and albumen being effused together, the water being the more easily absorbed, the albumen is liable to be left in a solid form in the tissues; the very condition in which we actually find incipient tubercle. And the appearance frequently presented in recent depositions of tuberculous matter, indicates this very process. Gerhard, upon the subject of tuberculous infiltration, says, "In other cases, the tissue affected is infiltrated with a greyish semi-transparent liquid, which does not at first reveal its peculiar structure, little by little this disappears, and is gradually absorbed as the quantity of the new substance increases." In this, too, we recognize the "gelatiniform tuberculous infiltration" of Laennec, who recognizes it in many cases as the primitive state of tuberculous formations. Tuberculous nuclei thus originating, the manner of their growth or aggregation may be referred either to ordinary laws of affinity, by which particles attract and appropriate others that are similar, or to continued infiltration under the continued influence of the primary cause of the disorder.

This hypothesis is strengthened by the following facts, which any practitioner may readily test.

1st. The sputa from a vomica, when boiled or poured into boiling water, coagulates into a mass, not distinguishable (except when very putrid) from so much boiled albumen of an egg.

2d. When a scrofulous tumor of the neck has softened, if it be freely opened and all the tuberculous matter squeezed out, it will speedily heal up soundly, provided the diathesis which caused the disease be, in the mean time, changed by appropriate treatment; otherwise it will remain open, and every two, three or four days, its whole inner surface will be found encrusted with a layer of pure, solid, tuberculous matter, an encrustation of which, from one-eighth to one-fourth of an inch thick, may, in some cases, be detached with a probe, two or three times a week. The discharge during this time consists of colorless water, the albumen adhering with some tenacity to the fleshy surface of the abscess. The first indication of healing in such an ulcer, is the secretion of pus. At whatever point yellow creamy matter is seen, healthy granulations will also be discovered; suppuration gradually extending, supersedes the albuminous deposit, and presently covers the whole surface of the ulcer, which then speedily fills up and cicatrices. The healing process in the lungs, in this disease, is probably the same; and if so, the purulent expectoration, which so much alarms many physicians, who suppose it to indicate ulceration, should rather be looked upon as the harbinger of healing.

We will here take occasion to say, for the benefit of physicians who have not been observant of the progress of pathology, that the tubercles of the neck and of the lungs are both physically and chemically identical; exhibiting diseases which differ only in locality. We, therefore, with persons of albuminous diathesis, have only this difference, that in one case there occurs an effusion of albumen into the lungs, producing pulmonary consumption; in another, into the abdo-

minal viscera, to the production of tabes-mesenterica or negro-consumption; in another, into the tissues of the neck, producing scrofula or king's-evil, etc., all once reckoned different diseases, now known to arise from the same constitutional bias—and they require the same general treatment.

We now proceed to the second inquiry.

Second. Are tuberculous deposits removable? If so, by what processes?

Modern pathologists generally concur in dividing tubercular consumption into two stages, having reference to the only well-marked change which occurs in the progress of the disease. The first extending from the incipient formation of tubercles to their maturity. The second from the commencement of their putrefaction,* (softening,) to the termination of the disease.

We know of no physiological process by which solid tubercles, or, in other words, tubercles in the first stage of consumption, can be removed from the tissues of the lungs, but absorption. In the second stage, for the removal of softened tubercle, we have the additional processes of ulceration and expectoration.

Whether the foregoing pathology of consumption be admissible or not, we have, at all events, positive assurance that the tubercles which constitute the disorder are albuminous, and that they generally present a very pure specimen of this material.

The removal of tubercles in the first stage of consumption, then, and indeed, the *curability of the disease*, rests mainly on the decision of the question,

CAN ALBUMEN BE ABSORBED?

We have the best possible evidence that albumen can be and is being absorbed during every moment of man's existence. All physiologists agree that the lymph is wholly made up of matters *absorbed* from the tissues of the body; and this fluid, according to M. Chevreueil's analysis, is composed in 1000 parts, of

Water,	926·4
Fibrine, (coagulable albumen,)	4·2
Albumen,	61·0
Muriate of soda,	6·1
Carbonate of soda,	1·8
Phosphate of lime, Phosphate of magnesia, Carbonate of lime,	0·5
	1000·0

Now, if we deduct the water of solution, there remains about 89 per cent. albumen, and 11 per cent. mineral matter, showing a larger proportion of albumen in this recently-absorbed matter than is found either in serum or tubercle. With all unprejudiced minds it might be assumed, that the above question is herein satisfactorily answered; for, if lymph is made up wholly of absorbed matters, and its solid materi-

* In process of softening, the fluid matter is almost always first detected at or about the centre of the tubercle, the organization of which, if organized at all, is too imperfect to justify the assumption of its arrival there by process of secretion.

als correspond almost identically with those of tubercle, the conclusion would seem irresistible, that tubercles themselves can be absorbed. But the pathologists of our day, whose labors have developed the real nature of tubercles, still adhere to the old treatment, and still seem possessed with all the horrors our predecessors entertained with regard to them. A decent respect, therefore, to the opinions of the past, and a proper regard for the prejudices of the present, require that our answer be more fully developed.

The fact has been heretofore adverted to, that the tubercles which occur in the neck, are identical with those in the lungs. M. Louis informs us, that he has never, in his post-mortem examinations, and they have been vast, found tubercles in the neck, without also finding them in the lungs of the same subject; so that he has come to consider tubercles in the neck pathognomic of tubercles in the lungs. In post-mortem examinations of 349 consumptive adults, he detected tubercles in the necks of one-tenth of them.

M. Lombard, physician to the "Hopital des Enfans Malades," at Paris, on indiscriminate post-mortem examination of all who died at the institution, discovered tubercles in three-fourths of all those who died between four and five years of age, this being the most consumptive period of human life. In his dissection of one hundred young tuberculous subjects, he found tubercles in the lungs of *seventy-three*, in the neck of *seven*. Now, if three-fourths of the children who die between four and five years of age have tubercles, and the proportion of tubercles in the lungs to those in the neck is the same in living children, (viz, as seventy-three is to seven,) and, if in subsequent years we are even proximately as liable to tubercular diseases as in the fourth, it would seem to follow, that but a small portion of the human family passes through life, or even arrives at maturity, without having undergone some tubercular affection of the lungs. Spontaneous recoveries or cures by appetency in dieting, must, therefore, in early life, be of frequent occurrence. It is remarkable what numbers of children we see with tubercles in the neck, from whom they disappear without treatment! No observant physician, during twelve months' full practice, can have failed to observe this frequently. But the reliable post-mortem examinations above referred to, force upon us the conclusion, that the proportion of those who have tubercles in the neck, to those who have them in the lungs, must be reckoned as only about one to ten; and since universal observation attests the removal of tubercles from the neck, or other superficial situations, by process of absorption, it is certainly legitimate to infer their removal from the lungs and other concealed positions, by the same process. This inference is greatly strengthened by the fact, that the lungs are more abundantly furnished with absorbent apparatus than the neck or any other portion of the body. Such, indeed, is the abundance of absorbent vessels here, that they give the surface of the lungs the appearance of being completely silvered over. Besides, the vicissitudes of temperature, the various diseases to which the lungs are subject, and the secretions of which they are the organs, produce much more frequent necessity for energetic absorbent action here, than in the tissues of the neck; and if here, as in other parts of the body, the functional powers are adapted to the exigencies to which the organs are respectively subjected, absorption must be at least as vigorous in the lungs as in the neck, or other

parts of the body. Above all, we have the positive evidence of the absorbent activity of these vessels in the speedy removal of aqueous effusions, sloughs, and effusions of blood, in cases of wounds of the chest.

The question still remains, whether tubercles can be absorbed prior to softening, and this may be easily disposed of. We certainly do very often see them removed from superficial situations, without exhibiting any *appearance* of this change; and the fact that other solids, natural, morbid and foreign, animal, mineral and vegetable, organized and unorganized, have been known to be absorbed, compels us to answer this question affirmatively.*

On the arrival of the second stage of consumption, which is marked by softening (putrefaction) of tubercles, in addition to absorption, we have removal by ulceration and expectoration. This addition is far from being desirable, for, together with the sound albumen, a greater or less portion of the softened putrid matter is liable to be absorbed, producing hectic fever and sweats, prostrating the system and weakening or destroying the recuperative powers. Yet, even in this stage, we have conclusive evidence that cures have been effected; many reliable pathologists report post-mortem observations of escars and healed caverns, (which bore intrinsic evidence of their tuberculous origin,) in the lungs of persons who died of other diseases. In some cases they applied these observations to persons whose pulmonary disorders had been treated by themselves many years before, and who then presented all the symptoms and physical signs of having tubercles and tuberculous caverns, and who had been completely restored to health. These persons dying from other diseases, or having been killed by accident, some years afterwards, have presented these healed caverns in the very part of the lungs in which the physical signs had formerly indicated their locality.

In cures in this stage of the disorder, the softened tubercles, it is presumed, are removed chiefly by expectoration, the sound ones by absorption.

We now come to the third inquiry.

Third. What are our therapeutical resources for promoting the removal of tubercles?

The analysis of tubercle renders it evident, that the origin of tuberculous affections is to be looked for in the blood. The degeneration of the blood in these diseases, we have shown to consist essentially in a comparative excess of fibrine—that is, albumen—and a corresponding deficiency of red globules. The change required, therefore, is the restoration of this blood to its healthy proportions, and in order the more effectually to promote removal, and prevent re-accumulation of tubercles, the production of an opposite diathesis.

We have the evidence of all pathologists who have treated this subject, that when these two principles of the blood, the fibrine and the globules, vary, it is always in opposite directions, that is, when the fibrine has been found in excess, the globules have been found deficient, and *vice versa;* and we have the concurrent testimony of many able chemists, that the nuclei of the globules, amounting to about 98 per

* See Hunter on the Blood.

cent. of their volume, are solid albumen, and that the remaining 2 per cent. is chiefly peroxide of iron, in the form of capsules to the albuminous nuclei. The red globules exist nowhere in the body but in the blood-vessels, consequently they must of necessity be elaborated there, and the materials out of which they are elaborated must pre-exist there, and their analysis shows that at least 98 per cent. of this newly-elaborated compound is at the expense of the albumen,* thus reducing the albumen almost in proportion to the increase of the globules. The result is a deficiency of albumen, and a consequent demand for this ingredient in the nutritive function, calculated to cause its absorption from every available part of the body accessible to the absorbents.

Our most reliable therapeutical resources for effecting the required removal of tubercles must, therefore, consist mainly of such articles as best promote the transformation of albumen of the blood into red globules, and of these it is believed the following are most efficient:

First, Iron. Every preparation of iron has been found efficient in increasing the red globules, and in reddening the complexion; and as iron constitutes the principal ingredient of the globule capsule, the presence of a due portion of it in the blood, it would seem, is essential to the transformation of albumen into red globules. Nor are we without important testimonials of the efficacy of this agent in the prevention and removal of tubercles, from which we select the following:

"M. Costen has submitted several animals to various processes, for the purpose of determining how far the formation of tubercles may be prevented by diet, but principally by the administration of medicines with their food. Some rabbits were fed in the open air, and in the usual manner; another set were shut up in narrow boxes in a moist, cold place, and deprived of light, air, etc.; they were fed on potatoes, turnips, etc.; a third set were placed in the same circumstances as the latter, and nourished in the same way, but they were given every second day some bread containing nine grains of carbonate of iron. The animals were killed after the lapse of five months. The first set were healthy; the second set had tubercles in the lungs, or other parts of the body; while the third set remained completely free from any trace of tubercle. M. Costen informs us that he has performed similar experiments on dogs, chickens, etc., and invariably found that the bread containing iron prevented the formation of tubercles."†

Second, Alcohol. Alcohol, and alcoholic beverages, possess a well-known efficacy in the production of red globules; and are not without testimonials of their salutary efficiency in tubercular diseases. A prescription, however, somewhat dangerous!

Third, Naptha or Wood. The use of this article strengthens the appetite, improves the digestion, and manifestly increases the globules, and is recommended in the treatment of consumption, with an exaggeration, it is feared, usually incident to new remedies.

Fourth, Iodine. This article is productive of similar effects with the above, and is of well-known efficacy in promoting absorption. It

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* It may be that it is out of the fibrinous (the most highly-organized portion of the albumen) that the globules' nuclei are by preference elaborated; this is of no practical importance.

† Provincial Medical and Surgical Journal.

is highly commended by M. Lugol, and others, in tubercular diseases.

Fifth, Animal Food. It is matter of common observation, that persons who subsist chiefly on animal food are more ruddy and athletic, and are more vigorous both in body and mind, than those who subsist on vegetable or lighter diet; and, that the diseases to which they have greatest tendency, are gout and apoplexy. Nor are we without good authority, that fresh meat used alone, in military garrisons, has occasionally produced scurvy, the disease of all others in which the blood has been uniformly found most excessively globulous. Aldrovandi has found that beasts and birds of prey, especially the hawk, are subject to gouty concretions; and it is well-known that carnivorous animals are less subject to tubercles than herbivorous. The native Hindoos, who subsist almost exclusively on vegetable aliment, many of them entertaining religious scruples which preclude the use of animal food, are in the proportion of thirteen to one more consumptive than resident Europeans.*

Consumption is scarcely known among the Indians of North America, who subsist almost entirely on animal food; while among their civilized white neighbors, who enjoy the same climate and are less exposed to the vicissitudes and inclemency of the weather, it is the cause of from one-sixth to one-fifth of all the deaths that occur.

Sixth, Common Salt. This is probably the most efficient article of the Materia Medica in treatment of tubercular disorders. It is to an excessive use of this that scurvy is generally ascribed; but as we have better evidence of the origin of this disease from the combination of salt and meat, we shall treat of it as the result of a too free use of salt meat diet.

Scurvy is characterized by an excessively-globulous condition of the blood and deficiency of fibrine, and by morbid absorption of solid albuminous tissues of the body *into* the blood vessels.† These characteristics are exactly the opposite of those of consumption, they being excess of fibrine in the blood and deficiency of globules, and a morbid effusion of albumen *out* of the blood-vessels into the solid tissues of the body.

Scurvy is caused, in most cases, by living too exclusively on salt-meat diet; and is cured by resort to succulent vegetables, acid fruits, etc.

Consumption is caused by insufficiently-nutritive or too diluent and succulent a diet; by such diet, in fact, as cures scurvy; and we trust to be able to show that it may be *cured* by such diet as *causes* scurvy.

To cure consumption, it is necessary to remove the tuberculous deposits from the lungs. To effect this, we know of but two processes—first, expectoration; second, absorption.

To the process by expectoration it is pre-requisite that the tubercles should putrify (soften) into a vomica, and ulcerate a passage into a bronchial tube. In this stage of consumption the lungs usually contain tubercles in every stage of their progression, from their incipiency to

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* See Marshall's Medical Topography of Ceylon.

† The albuminous tissues, the skin, the vascular and the cellular tissues, are absorbed in scurvy in preference to the muscular flesh.

their maturity, decline, and putrefaction. The ulceration, together with the absorption of putrid matter, in this process of removal, is productive of the hectic fever, sweats, diarrhœas, etc., that characterize the last stage of consumption, and which, if continued long enough to remove any considerable accumulation of tubercles, but few constitutions could bear; and even in cases of recovery, with lungs so mutilated by caverns and escars impervious to air, all the cicatrized portions functionally destroyed, existence would be scarcely desirable.

Removal of tubercles by absorption produces but little derangement of the structures in which they had been lodged, as may be observed by examination of the tissues of the neck from which they have been removed by this process; and, if absorbed prior to putrefaction, the process causes no material functional disturbance in the system—it is but returning a natural constituent to its original source. This method, then, is in every way to be preferred.

Long sea voyages have in all ages been observed to cure consumption, and to invigorate weakly travellers; and voyages thus curative are as constantly reported to be productive of scurvy in the stoutest sailors. Cures thus accomplished, on persons we have met with, seemed evidently to have been effected by absorption. These persons have concurred in the representation that the earliest symptoms of amendment were diminution of the cough and expectoration. In many of the published cases, too, we find those changes reported as the first indications of improvement. This must necessarily have been otherwise had the removal been effected by expectoration. Some of the subjects we have met with had tubercles in the neck as well as in the lungs; these, too, they reported to have disappeared along with the pulmonary symptoms, and without ulceration.

We are, moreover, aware, that the scurvy which occurs on such voyages is productive of excessive absorption, not only of tubercles, wens, and other adventitious structures, which are observed always to be first acted upon, but also of the natural structures of the body. Such absorption, when occurring, is observed, first, to affect newly-formed structures; and as it progresses, escars and callus are removed, and wounds which had been healed up for fifty years, are opened as if newly inflicted, and broken bones that have been long knit, are disunited;* then follows the absorption of original tissues; and of these, the first and principal are, the albumen, the skin, the vascular, and the cellular, etc., in which great ulceration is observed, before there is much disturbance of the muscular flesh.

But tubercle, when absorbed, is conveyed by the lymphatics back into the blood whence it had been ejected; which process, if no change in the condition of the blood has been effected in the interim, places it in the same condition which created the original necessity for albuminous effusion. The requisite change to prevent this can be effected by no processes, familiar to physiology, but those of *excretion* or *transformation*. Process by transformation fully accounts for all the changes which pathologists have observed; for, in whatever manner or by whatever means a globule is generated, its nucleus, amounting to about 98 per cent. of the entire globule, is produced at the expense

* See Lord Anson's Voyages.

and to the reduction of the albumen. This accounts for the fact noticed by all observers, that these elements, when deviating from their healthy proportions, always deviate in opposite directions. Nor is the process of transformation less familiar to physiology than that of excretion. It is by transformation that blood is converted into bone, muscle, and tendon, and these, after a while, into lymph, which is again transformed into blood. Yet none of these transformations occur, unless the ingredients of the transformation are contained in the transforming laboratory.

Modern chemists have detected in the composition of the blood, the existence of the principles of every tissue and secretion of the body; and experimentalists have ascertained, that if an animal is fed on a diet deficient in a requisite principle, an arrest of development occurs in the part to which it is essential. A hen, for instance, deprived of lime, or other matter containing it, in time will lay eggs without shells. This is strikingly analogous to the formation of globules, etc. If food is not supplied containing a sufficiency of iron for the formation of the globule capsules, the albumen becomes excessive in the blood, in consequence of the supply derived from the chyle and lymph. If, on the other hand, the food contains an excess of feruginous matter, a transformation ensues productive of deficiency of albumen and excess of globules; so that there exists a perpetual liability to one or the other of these morbid conditions. The *modus operandi* of the production of globules by alcohol, animal food, salt, etc., is less comprehensible than that by iron; though the fact is equally evident. But, however effected, the transformation is always to the amount of about 98 per cent. of the new compound at the expense of the albumen, and is, therefore, corrective of the albuminous degeneration, and curative of consumption.

If such change should rather be attributed to excretion, even then, transformation of albumen into water would be pre-requisite to its excretion by the skin and kidneys; as difficult an elaboration, perhaps, as into globules; for, excretion of *albumen*, in this way, is altogether too rare an occurrence to account for the frequency of these changes; and, moreover, this would leave the simultaneous increase of the globules unaccounted for and unaccountable. Globules are elaborated only in the blood-vessels, consequently all the materials for the new compound must pre-exist in the blood.

Let us now take a cursory view of the other side of this subject, and give a little attention to the philosophy of the cure of scurvy. For the cure of scurvy, acid fruits are found most efficacious—the class hesperidium especially—lemons, sour oranges, limes, etc., are considered specific. Chemistry develops the fact, that the citric acid of these fruits produces, in combination with iron, a perfectly soluble compound. This acid entering into the blood, then, and combining with the globule capsules, would convert the insoluble peroxide into the citrate of iron, which is perfectly soluble in water, in which condition it is capable of being thrown out of the body by perspiratory excretion; thereby divesting the albuminous nuclei of their red coats, and leaving them in the condition of free albumen in the blood. Thus at once diminishing the proportion of globules and increasing that of albumen. These fruits, by the way, may be found as beneficial in apoplexy as in scurvy.

Inhabitants of tropical climates seem to have become as familiar

with the bad effects of these fruits in consumption as of their benefit in scurvy. We have been informed by consumptives who have resorted to Cuba, that they have been repeatedly warned of this by the natives. If the hesperidium do produce the albuminous degeneration, I can conceive no more rational manner of accounting for the fact than the above; for albumen does not abound in these fruits.

By process analogous to the above, Dr. Ure has succeeded in correcting the calcareous degeneration. By the use of benzoic acid he effected the transformation of the uric acid in the blood into the hippuric; to the production of a soluble in the place of an insoluble salt; a hippurate in place of an urate.

We have dwelt the longer upon this branch of our subject, because, in ascribing these sea-voyage cures of consumption to the supercession of the scorbutic diathesis, we are sustained, as far as we are aware, by none of the standard authorities. We, therefore, deem it advisable to sustain the hypothesis, to the best of our ability, by all the facts within our reach. Whether what we have adduced be convincing or not, it certainly cannot be much less satisfactory than most of the authorities above referred to, most of which concur in ascribing those sea-cures to "inhalation of the pure sea air, and the salubrious exercise of sailing;" and under the same circumstances, sometimes with reference to the same voyage, attribute the accession of scurvy to "bad air, bad food, and want of exercise."

It by no means invalidates our hypothesis, that many consumptives, within the past and present century, have been put upon voyages which have proved utterly fruitless. Physicians, through ignorance or negligence of the true curative principle of *long* sea voyages, have vainly attempted to effect the necessary results, by requiring their patients to perform a succession of short voyages—such as from Liverpool to Venice, to and fro, and around and about the Mediterranean—and have even preferred such voyages, on account of the facilities of procuring what they supposed to be suitable provisions, vegetables, fruits, etc. Now, if our theory be correct, that which was considered recommendatory of these short voyages, namely, the facilities of procuring vegetables and fruits, constitutes the very cause of their failure. Yet, we do not contend for the absolute necessity of *long* voyages, nor indeed of any voyages whatever, since the salt-meat diet, which produces the scorbutic diathesis, is quite as attainable on land and quite as efficacious as at sea—the only difference consisting in the difficulty which sometimes occurs, in getting patients to adhere to the prescribed diet on land, whereas, on long voyages, they have no alternative. On many accounts, indeed, home is to be preferred. In cases of disordered or weak condition of the digestive organs, for instance, salt-meat diet manifestly cannot be borne; and at sea, where there is no alternative patients in such condition speedily die off. It is proverbial of consumptives who go to sea, that they either die soon, or recover their health. On land, many of these fatal cases might gradually be brought to bear the diet and treatment requisite to their restoration.

Scurvy has, in all ages, been of frequent occurrence in besieged garrisons, whenever the besieged have been for sometime without supply of vegetables. We also have the assurance of creditable medical record, that scurvy "was endemic two centuries ago in all the North of Europe," and that it gradually became less common as agriculture

and horticulture improved. Huxham speaks of it in England, in his time. He remarks that it was common with fishermen and tradesmen, and seldom met with in agricultural laborers, who drank cider and ate vegetables and fruits. All the writers of these times refer to the latter part of winter and the early part of spring, as the seasons in which scurvy prevailed most; in this we recognize the periods in which salt-meats are the most extensively and vegetables the least used. English history, of this period, informs us that the people attended but little to agriculture, their attention being almost exclusively devoted to grazing. They fattened their cattle and sheep on grass in the summer, and in autumn killed and salted away their year's supply of meat; and this, it would seem, was subsequently eaten almost or wholly without vegetables. "It was not," says Hume, "till the end of this reign, (Henry VIII.,) that any salads, or other edible roots, were produced in England. The little of these vegetables that was used, was formerly imported from Holland and Flanders. Queen Catherine, when she wanted a salad, was obliged to despatch a messenger there on purpose."

In this state of affairs, it is evident that the fare throughout the country must have been nearly of the same character as sea-store diet. While such were the habits of the English people, scurvy was their scourge, and consumption but little complained of. Even at a much later period, we have the high authority of Sir Gilbert Blane, that scurvy prevailed most fatally, especially among the maritime portion of the population; amongst whom he estimated it to have been productive of greater mortality than all other diseases, including maritime accidents and the horrors of warfare. During this whole scorbutic reign, consumption is not noticed as a prominent disease. Yet, among the same people, who have only so far changed their habits of living, as to esteem succulent vegetables as essential articles of diet, and to use fresh instead of salted meats, scurvy has now become little else but matter of history, whilst consumption has become a scourge—the cause of one-fourth of the deaths that occur in the three kingdoms.*

The preceding are the only articles of well-established efficacy in changing the albuminous diathesis. But it would appear from the premises, that whatever tends to increase the blood globules, produces the requisite change, and is to be considered (in like degree) curative of consumption. Other articles of value will, in time, doubtless be added, which, if not equally efficient, may be better adapted to some stages and conditions of the disorder than any of the above. These articles, though concurrent in increasing the globules, seem to accomplish this result through, or accompanied with, different impressions on the system, and by a choice among them, regulated by more extended observation and better judgment in adapting them severally to the peculiarities that may exist in different cases, important improvements may be anticipated in treatment.

The new diathesis which is produced by alcoholic beverages or animal food, generally tends to gout or apoplexy; that by salt, or more especially salt-meat, to scurvy. The first two are grievous and dangerous disorders, and difficult to control. The third presents the

* See Clark on Consumption.

advantages of being more easily produced, more active in eradicating the albuminous degeneration, and of being perfectly manageable and destitute of danger.

For the production of scurvy, salt is recognized as the most energetic article; but the best established agent for its production is salt and meat in combination; and it probably matters but little whether the salt be added in cookery or imbibed by the meat in process of curing.

Iron increases the globules more slowly than salt and more rapidly than alcohol, but not in any known case to an equal excess with either; nor does it seem to produce a tendency to any bodily disorder, the change effected by this article being, perhaps, more a natural than a morbid process.

For these articles, consumptive persons, generally, have an instinctive appetency, especially in childhood. An avidity for strong drink, an appetite for gross diet, and such an avidity for iron as to scrape the rust off of old bars and hoops to eat it, are often exhibited. Good housewives, who use copperas in dyeing, are often alarmed at the appetency evinced for it by their children. When iron is prescribed to be taken two or three times a day, tuberculous children are often found demanding their dose in anticipation of the time. The appetency for common salt is equally remarkable, and even more common. When such appetency is very strong, especially in children, it may often suffice simply to prescribe removal of restraint, and rest the cure on the indulgence of the appetite. A marked deficiency of such appetency presents an unfavorable prognosis.

It scarcely need be remarked to intelligent and educated physicians, that it is not in every case, nor at all times in a majority of cases, that the treatment here suggested can be borne. Cases of the disorder, originating from inveterate irritable ulcerated or dyspeptic conditions of the alimentary canal and digestive organs, are sometimes placed without the pale of treatment, which is of necessity conducted essentially through the chylopœtic viscera; wherefore, unless these be first restored to a suitable condition, we can accomplish nothing; such restoration is sometimes impracticable. In other cases, we encounter the consumptive at so advanced a period, that we have not time for the accomplishment of the necessary results. The presence, too, of tubercles in the lungs, renders these organs peculiarly liable to catarrhal and other irritable and inflammatory attacks. These, if at all considerable, render the prosecution of so stimulant and tonic a treatment inadmissible during the continuance of such complications. So, also, with regard to the occurrence of inflammatory irritation or morbid secretory action in the alimentary canal, or of any considerable degree of fever, hectic or other. All these require suspension of treatment until they subside or are subdued by their appropriate treatment, and the practitioner's success will be very much in proportion to his skill in discriminating and early detecting such complications. Other medical articles may be used advantageously in co-operation with the above, neither should suitable exercises and external appliances be neglected; but a detailed notice of these would extend this article to an unsuitable length.

The writer of this, in his treatment of consumption, during the period of nearly thirty years, has practised the tonic and stimulant portion of the above-recommended treatment with some success. Through a considerable part of the early period of this time, it was his custom

to let blood on nearly every occurrence of hæmoptysis; and in such blood the deficiency of globules and the excess of serum were constantly observable. Upon amendment of the patients, it was also observable, that the increase of the globules, evinced in the heightened complexion and the cherry-color of the lips, furnished the earliest indications of convalescence; and in several cases of the restored, tendency to apoplexy was afterwards manifested. These observations led to a comparison of the conditions of the blood in the two diseases, and in every instance it presented as marked a difference as is exhibited in the aspects of the subjects of the respective disorders. This induced the conclusion, that the value of the treatment was to be estimated in proportion to its efficacy in increasing the proportion of globules in the blood, and that every article found to be decidedly productive of this result, might be advantageously added to our therapeutical resources.

It was only within the last fifteen years, that an opportunity occurred for the observation of the blood in a case of well-marked scurvy, and to his surprise it abounded more in globules than any he had ever beheld. Here, he conceived, he saw a solution to the mystery of those sea-cures which had long perplexed him. The observation was followed up by immediate and vigilant research, in the prosecution of which, he had the gratification to find his own observations confirmed by various British naval surgeons, as well as other writers who had examined the condition of the blood in this disorder. This confirmation was productive of vigilant inquiry into the causes of scurvy, in quest of further means for treatment of consumption, which, together with a knowledge of the physical signs required at about the same time, eventuated in greatly-increased success. But it is only within the last five years, that, with the aid of the late unrivalled progress in pathology, he has been enabled to systematize his views satisfactorily, with regard to the pathology and treatment of tubercular disorders. Cures, accomplished previously, were effected, he knew not why nor wherefore.

In the foregoing essay, the writer has restricted himself to facts and inferences drawn from developments of none but the highest pathological authorities, abstaining as much as possible from any reference to his own observations. Availing himself of his own observations, he might have added, that in incipient cases of consumption, there exists an excess in the proportion of the albumen of the serum,* whilst in advanced cases, this becomes variable, and in some cases, is even

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* The knowledge that blood-letting rapidly reduces the blood-globules, has very much restricted my analysis of consumptive blood. A condition, however, occasionally occurs in which moderate blood-letting may be practised to advantage. No physician should, in such case, neglect to analyze. Fiquier's process for this is so simple, that any one may accomplish it. He discovered that admixture of a neutral salt prevented the globules from passing through filtering paper. His process is as follows: 1st. Separate the fibrine by switching with small rods, in the usual way. 2d. Add to one part of the defibrinated blood, two parts of a solution of sulphate of soda, of the specific gravity of 1·130. On filtering this, the globules will remain on the surface of the filtering paper. 3d. The albumen is separated by coagulating by application of heat. Dry and weigh these ingredients separately. 4th. The proportion of water is determined by the loss sustained on evaporating to dryness a portion of blood previously weighed.

below the healthy proportion—a deficiency which is probably attributable to the copious effusion and expectoration of albumen that occurs in such cases. He claims, therefore, only the merit of having here brought together and compared the pathological developments of various eminent men, and of having made some original deductions therefrom.

ART. IV.—*Epidemic Dysentery.* By JAMES BRYAN, M.D., Lecturer on Surgery, late Professor of Surgery and Medical Jurisprudence in the Academy of Medicine, Vermont. Also formerly Physician and Surgeon to the Philadelphia Dispensary, etc.

Quod ad anni tempora, sequidem hyems sicca et aquilonia fuerit, ver autem pluviosum est australe, state necesse et febres acutas crisi, ophthalmias, et *dysenterias*, maxime autem butem mulieribus et viris natura humidis.—*Aph. Hippoc.*, sec. iii.-ii.

THE winter of 1846—7 in Philadelphia was certainly "sicca et aquilonia," dry and cold, particularly the latter part of it, and acute inflammations were of course common during the greater part of the winter. The spring was "pluviosum" or wet, and was also cold and late; and so far does not correspond with the description of the father of medicine. A large amount of rain fell during the months of March, April and May, with what is generally understood as a "raw atmosphere." Not until June did the thermometer rise sufficiently to make it comfortable without good fires in our houses.

The latter part of June, however, became suddenly warm; and in the beginning of July, the heat became intense, alternating with heavy showers of rain. From the middle of July to about the 10th of August, the weather was most oppressive, and remarkable for the suddenness with which, on several occasions, the thermometer fell in a few hours at one time to the extent of forty degrees between the evening and the following morning. The change was most uncomfortable. On one day the heated air appeared as if issuing from a furnace, and the next morning winter clothing was necessary. The cold continued for three or four days, gradually giving way, until the thermometer rose again to the point (more than one hundred) to which it had risen before. Large numbers of children and old persons died suddenly during this time.

The Dysentery commenced in May, and has continued to the present time, 20th of August. The last case I was called to, was a lady about eight months gone in gestation; the disease is yielding very rapidly to the calomel, ipecacuanha and opium treatment, with starch and laudanum injections.

The severest cases occurred about the middle of July, and the mildest are those seen now.

The following cases are presented as examples of the disease and its treatment, as observed by myself. As usual, in the language of Dr. Rush, the epidemic influence has induced most other diseases "to wear its livery." Perhaps the most serious attendant and follower of the disease was engorgements of the brain and inflammation of its membranes. This was particularly the case about the middle of July, when the heat was greatest and most oppressive. The mortality among children, at that time, was much greater than has been usual

at the same season of the year; many of them dying of diseases of the brain and its membranes.

In many instances, in adults, the disease (Dysentery) was accompanied with general jaundice, and sallowness of the skin. The attack was often sudden, during a meal, or in the midst of conversation, or after drinking water; the latter would be instantly expelled from the stomach, and the vomiting and nausea would continue long after the discharges per anum had commenced. Almost every one suffered from a feeling of nausea, a disposition to costiveness, or a diarrhœa; generally the latter following on the heels of the constipation. A diarrhœa commenced, changed to a Dysentery in a few hours. The symptoms could not be attributed altogether to the heat of the weather, or the use of unripe fruit; (the latter, we believe very unjustly, stands as the scape-goat for all bowel affections during the summer months;) because they commenced long before the thermometer had attained a high range, and two whole months before the fruits of the season appeared in our markets.

I had not an opportunity of making many post-obit examinations. In one case, which occurred in the practice of three of our most eminent practitioners, I found pretty extensive ulcerations in small spots over the lower part of the colon and throughout the rectum; they were not, however, deep; the mucous membrane seems alone to have suffered, appearing as if nibbled by some insect. It was also softened and thickened.

General bleeding, as far as my experience and that of a number of my medical friends extended, was not found necessary. Leeches and blisters, particularly the latter, produced very happy effects. In some cases the starch and laudanum clysters, with the exhibition of calomel and opium *per orem*, met the indications, and were successful. In most of my cases I found the "Hope's Mixture," or a modification of it, entirely successful. The use in the early stages of mass. hydrarg. in three grain pills at night, in conjunction with the acid treatment, was found very effectual in checking the bilious vomiting and nausea, as well as changing the bitter taste in the mouth. Small quantities of ice, allowed to melt in the mouth, were the best means of relieving the thirst, which, in most cases, was very urgent. I did not find the combinations of ipecacuanha, opium and calomel, so successful this season as formerly in dysenteric affections.

The disease was confined to no age, color, or condition in life. My own observation, however, induced me to believe that the black did not suffer as much as the white portion of our population.

Case 1st.—On the 15th of June, I was called to visit Miss A., aged nine years, with a severe Dysentery, the sixth day of the disease. I commenced the treatment with the use of the acetate of lead and opium, with starch and laudanum clysters. This proving ineffectual, I tried the hydrargyrum cum cretâ et opii, in conjunction with mucilaginous and opiate injections. On the tenth day, I commenced, on the recommendation of my friend, Dr. S. G. Morton, who consulted with me in the case, the use of the following mixture:—

℞ Acid nitric, gtt. iv.
Aquæ camph., f ℥ iv.
Tinct. opii, gttt. lx. M.

Take a tea-spoonful every hour, and use the starch and morphia in-

jections. This treatment, with the use of a mild nutritious and unirritating diet, was continued up to the fourteenth day, when the symptoms had so far abated, that she was directed to use a mild cold infusion of Prunus Virginianus bark. The convalescence was slow but regular; and in about three weeks, with the use of the above infusion, and two or three other tonics, she was able to go out of the city to the country.

The following case, though not strictly *indigenous* to our city, is given as exhibiting, in an aggravated form, the symptoms of the disease as imported from Mexico, where it is known to have been very prevalent and fatal among the men of our army.

Case 2d.—On the 19th of July, I was requested to see Capt. G. D., who has suffered with chronic Dysentery, more or less, during the last four months. He has just returned from New-Orleans, between which place and Vera Cruz, Tampico, Metamoras, and other Southern ports, he has been engaged in his profession for the last ten months. On leaving this city, ten months ago, he was a fine, healthy, robust man. He is now very much emaciated; sallow, and scarcely able to walk or stand upon his feet. He has from twenty to thirty stools per diem, consisting of blood, mucus, and pus. Has very little appetite, continual and urgent thirst, with great tenderness of the abdomen, particularly in the epigastric region, continued jactitation and insomnia. The pulse is quick, small and frequent. Suffers very much from nausea and unpleasant tastes in his mouth and throat, with occasional vomiting of bilious and other matters, especially after drinking water, or other fluids. Is a perfectly temperate man.

I commenced the treatment by prescribing the following:

℞ Acid nitric, gtt. iv.
Aquæ camph., f ℥iv.
Aquæ morph., f ℥ss. M.

Take a tea-spoonful every two hours, and to take in the evening one three-grain pill of mass. hydrarg.

20th. Eleven o'clock, a. m. No stool to-day up to this time. The number of passages during the night much diminished. This freedom from stools, he says, has not occurred before, since the commencement of the disease; feels generally better.

21st. Number of stools increased, and pain returned both at stool and in the intervals. To take a clyster of thin flour starch with a tea-spoonful of the liquor morphia, and repeat during the day.

22d. Passed a bad night. Vomited several times, the stools have increased very much in frequency, the pain is greater with great debility: to take the following:

℞ Spts. nit. dulc., f ℥ss.
Aquæ puræ, f ℥iij.
Acid nitric, gtt. iij.
Liquor morph., f ℥ss.
Sacch. alb., ℥i.

M. To take two tea-spoonfuls every two hours, alternating with the following:

℞ Protochlorid. hydrarg., gr. vj.
Pulv. opii., gr. iij.

M. dividend. in chartul., No. xii., taking one every two hours. Emplast. cantharid., 5 by 5 inches, applied to the hypogastric region, to remain six hours. Small lumps of ice to be allowed to dissolve in the mouth as a drink diet, boiled milk well salted.

Ditto, 5 o'clock, p. m. Blister smarts very much, is very red and discharges freely. Patient lies upon his back; stools but two, since nine o'clock this morning. To apply bread and water poultice to blister, and to take at nine o'clock this evening two tea-spoonfuls of the liquor morphiæ, with the view of producing sleep.

23d. Nine o'clock, a. m., has had but two passages since five o'clock yesterday; tongue more furred, particularly in the centre. The blistered surface discharges freely. The pain in different parts of the abdomen is much less, but the blister is very sore and painful. Continue medicines, and to take some weak mutton soup, with a small quantity of rice in it.

Ditto, 5 o'clock, p. m. Only three stools during the day; no pain, no blood in the discharges. Patient remains on his back, on account of the blister. Continue medicines and diet; the soup agrees well with the stomach. Had a refreshing sleep from ten to two o'clock; this, with one hour's sleep obtained last night, is the first he has had for a long time.

24th. One stool during last night; taken a pint of boiled milk this morning. One stool this morning; slept very well last night, without morphia. The blister healing slowly. No pain.

25th. No stools last night, but one this morning, and that nearly natural and without pain or blood. Slept well, has taken "tea and toast" for breakfast, is able to sit up and shave himself. Continue acid mixture.

26th. Appears convalescent: to take camomile tea, and continue acid mixture in half the former doses. The patient continued to improve, the appetite increased, and the digestive organs became strong and healthy.

Case 3d. On the 28th of July I was called to visit Mr. T., a young man twenty-five years of age, a house-painter. Had suffered during the last five days with occasional pains in the abdomen; with nausea and diarrhœa, the discharges tinged with blood. He had taken some medicine once or twice, with partial relief. This afternoon he was seized with intense pain in the bowels and excessive vomiting. Several painful anal discharges mixed with blood. When I saw him, I found him tossing about on his bed in great pain. Every now and then vomiting freely, cold skin and sweat; small pulse, thirst, with pain in the head, and generally through the bones. The tongue was covered with a thick fur, dark in the centre. I directed a pediluvium of warm water and mustard, a large sinapism to the abdomen, and twenty grains of calomel to be administered in molasses. The dose to be repeated at the end of three hours. The thirst to be allayed by pieces of ice allowed to melt on the tongue. Cold applications to the head.

29th. The brother called early this morning, and informed me that my patient had had no vomiting after the first dose of calomel, the latter appearing to act as an anodyne. Had passed a comfortable night, slept well, and, in fact, was met in the street this morning considering himself well. I directed him to take a dose of oleum ricini. The cure was complete. Two other cases in the same house, on the same occasion, were treated in this way with like results.

Case 4th.—I was requested to visit a patient in West Philadelphia, Mr. D., a strong laboring man, who had had Dysentery for five days. On the first day he sent to Mr. B., a popular drug vender, for "medicine for the Dysentery." Some astringent mixtures were sent, the use

of which checked, in three days, the discharges; left the tongue furred, the pulse quick, the skin dry, the stomach irritable, and a continual *hiccough*, which was very distressing to the patient, and alarming to his friends. The hiccough had existed two days when I was called, accompanied with great difficulty in swallowing fluids. I prescribed twenty grains of calomel, to be repeated at the end of three hours. Meeting my friend, Dr. S. Jackson, of Northumberland, I mentioned the case to him, and he concurred with me in thinking the case somewhat dangerous, and recommended, if the prescription already made did not relieve the patient in 24 hours, the use of blue pill to salivation.

2d day.—The hiccough was moderated for a short time by the calomel, it having induced great sickness of stomach, and pretty free vomiting of bilious matter, which relieved the patient considerably for a short time. The second dose did the same thing to a less extent. Still, however, the hiccough continued. I directed a three-grain pill of blue mass to be taken every two hours, and a tea-spoonful of Hoffman's Anodyne every three hours; to take mutton soup and boiled milk well salted as a diet.

3d day.—The hiccough has nearly subsided, each dose of the anodyne relieves it; the bowels have been moved once, the appetite has improved, the stomach retains both soup and milk.

4th day.—The hiccough ceased at twelve o'clock last night; two passages per anum without pain or blood; strength improving, general condition much better; continue pills. This patient gradually recovered, but not until the gums were "touched." The convalescence was slow, but sure.

In this case, I considered that the stomach and liver had become, to a certain extent, paralyzed; very much as in the case of the confirmed drunkard, or in the latter stages of typhoid fever; and therefore prescribed the calomel in large doses, with the view of rousing them from their torpid condition. The use of the blue mass was of course designed to keep up the impression and continue the action; the favorable termination of the disease would seem to justify this view of the case.

September 1st.—In conversation with my medical acquaintances, and by my own practice, I find the bowel diseases above described have generally given place, at this early day, to autumnal fevers, generally of a bilious type. This is the case in the city proper, and more especially in the suburbs, and along the water-courses. The banks of the Schuylkill are lined with cases of bilious fevers, some of them very severe. The weather is close and sultry, with almost daily thunder showers, followed by a hot sun, which fills the air with terrene vapors impregnated with the gases thrown off from dead and decaying vegetable matter.

ART. V.—*Puncture of the Femoral Artery, treated by Compression, with some Remarks upon that Method.* By DEWITT C. ENOS, M. D., New York.

STEPHEN MERRITT, Jr., æt. 14, while engaged in whittling, August 1st, 1846, stuck his knife into his left thigh, and punctured the femoral artery in its middle third. The hemorrhage was profuse, yet he crossed the street, and walked nearly half a block, to get to an

apothecary's, where I found him, perhaps three or four minutes after the accident occurred. He was lying upon his back, on the floor, in the midst of a large quantity of bright arterial blood. He was pale and exsanguinated, yet the blood was gushing *per saltum* from the wound. This was immediately stopped by pressing, with my thumb, the femoral artery against the ramus of the pubis. The loss of blood had been so great, that, although the day was very warm, he could not endure the slightest current of air. Two methods of treatment at once suggested themselves, viz: the ancient one by ligature, and the modern one by compression. In consultation with Dr. Whitaker, who saw the case with me, it was resolved to try the latter. Accordingly, a tourniquet was placed upon the thigh, as near the groin as possible, and a compress was screwed down upon the artery, sufficiently tight to control the hemorrhage. The wound was then brought together by adhesive strips, and a compress placed over it, to guard against the occurrence of a false aneurism. The whole limb was then enveloped in a bandage, from the toes to the instrument, to prevent venous congestion. The patient was then put upon a cot, and the recumbent position was enjoined. Re-action soon set in, and I left him comfortable.

2d. Had slept well through the night. Tourniquet was loosened, and moved a little farther down. 3d. Was quite feverish. Took a gentle cathartic. He complained of his leg feeling numb. The bandage was removed, the limb rubbed, and it was re-applied. The point of compression was changed again. 4th. Had slept well. Was quite feverish and restless in the afternoon. He took ice. Leg was again re-dressed. Did not feel so numb. It thus went on well. The instrument was moved up and down on the thigh, as often as its continuance in one place became painful. At the end of two weeks, the instrument and bandage were removed, and the limb was perfectly well, except that he complained of numbness, which gradually yielded to friction, and the cold douche.

On reviewing the case, several queries naturally arise. 1st. Is it certain that the femoral artery was punctured? 2d. If so, how great was the wound in it? 3d. Did the treatment cause an obliteration of the artery? 4th. Does compression promise to be the best method of treatment in such cases?

1st. With regard to the first query, as to whether the femoral artery was punctured in this case, or not, I think it can be unhesitatingly answered in the affirmative, and for the following reasons. The hemorrhage was profuse, and therefore came from some large blood-vessel. 2d. The blood was of a bright-red color, and came jetting from the wound at every pulsation of the heart; therefore it came from an artery;—hence, as the wound was in the middle third of the thigh, it came from the femoral, or from some large branch of it,—but the only branches of the femoral, in its middle third, are the muscular, the largest of which is too small to have afforded the copious hemorrhage. That it could not have come from the profunda, or its branches, is clear, because they go to the limb posteriorly, and are there distributed; whereas the wound was upon the anterior and inner aspect of the thigh. It was directly over the course of the femoral artery, being in a line drawn from a point midway between the anterior superior spinous process of the ilium and the symphysis pubis

to the inner condyle of the femor. Hence the only inference that is left us is, (unless there chanced to have been some abnormal distribution,) that the knife penetrated the femoral artery.

2d. How large was the wound in the vessel? As the knife was small and pointed, and as it was thrust in nearly perpendicularly, I am inclined to think, that perhaps not more than a third of the circumference of the artery was divided.

3d. The first thought in reference to the third question naturally is, that the artery must have been obliterated; but I am confident that this was not the case. I did not attempt to accomplish it. The effort of the surgeons who first tried to make compression supersede the Hunterian operation for the cure of Aneurism, was to produce obliteration of the artery, by pressing the opposite surfaces of the vessel so firmly together as to cause inflammation, and adhesion between them. To carry out the theory, (and theory always influences the practice of rational men,) patients were subjected to *severe* and *continued* pressure. The circulation must be stopped in the artery, or else the adhesive effusion would be washed away by the passing current, and the opposite sides of the vessel must be kept in close and continued contact, or this adhesion could not take place. The consequence was, as might have been anticipated, that the tortured patient would, unbidden, remove the clamps and screws from his limb to obtain relief. Hence the frequent failure of the early attempts at compression. The very rigor with which those surgeons applied this treatment, was the source of their disappointment and chagrin. Here we see the value of an enlightened pathology, and its influence in the treatment of disease; for no sooner had Mr. Freer of Birmingham, in 1806, showed that pressure upon an artery caused an effusion of lymph, not within the artery, but in the cellular tissue around it, and between its coats, by which the calibre of the vessel was diminished, than the key was given to the successful application of compression to the cure of Aneurism. It was no longer necessary to keep up severe and continued compression; but gentle and occasionally-interrupted pressure, though too light to completely close the vessel, yet enough to check the force of the circulation, was found sufficient to cause an effusion of fibrin around the artery, beneath the point of compression, and to favor the coagulation of blood within the aneurismal sac. The cases of aneurism that have been cured by this system of treatment, are almost as numerous as the cases in which it has been intelligently and perseveringly applied.

In this case of puncture, I kept the patient *recumbent*, that the gravitating effect of the column of blood above the wound might be avoided. To counteract the action of the heart, I then made a moderate degree of pressure upon the artery, and maintained it at some point for twelve days. The force of the circulation was thus effectually controlled, and the effused fibrin and blood in the wound became coagulated; the passing current being too insignificant to retard the process, or to force the coagulum away. This coagulum finally became organized, the wound and divided coats became united, and the artery remained pervious and entire. The artery, then, was not obliterated, but its calibre was diminished.

4th. That is the best method of treatment which is most conservative of life. It requires more care to treat a case by compression, than

it does by ligature. A ligature is soon applied, and unless secondary hemorrhage occur, it gives no farther trouble. The surgeon, too, frequently gets more credit for its application, than for all the care and skill required in the treatment by compression. Hence, he is strongly tempted to apply the ligature. But I am satisfied, that where compression can be applied, and carefully attended to, for the cure of Aneurism, and arterial hemorrhage, that it is much the safer method. It cannot be denied, but that secondary hemorrhage frequently follows the application of the ligature. The surgeon is thus required to repeat, and re-repeat the operation, till he has driven the artery beyond the reach of the boldest hand, and then he is forced to the painful necessity of seeing his patient, without any hope of relief, expire before him. This is no fancy sketch. Alas! that there are so many veritable examples of its truth! I have now in my mind, one that occurred about the same time as this case of puncture. The tibial artery of an apparently healthy young man was wounded: the surgeon applied a ligature to the femoral, secondary hemorrhage followed, and the artery was tied farther up; again it was followed by hemorrhage, and the external iliac was secured; but again did the hemorrhage come on, and the patient expired.

A resort to compression amplifies our resources. Hence, it is more conservative of life.

If we at first apply the ligature, it is the only treatment we can adopt; for should it fail, the opportunity of then resorting to compression is rare. Whereas, should we first apply compression, and should it be found to fail, we can then resort to the ligature, as readily as at first. But the success which attends compression rarely makes it necessary. That which is complained of most by patients and surgeons, is the pain that compression gives. Dupuytren, after he had cured two cases of popliteal Aneurism by compression, and had failed in two, concluded that there are individuals who cannot bear compression; whilst there are others who endure it without inconvenience. But I am satisfied that cases of the former are rare, where the compression is *moderately, variedly* and *interruptedly* applied, according as the circumstances may require. I doubt whether the four cases of failure, spoken of by Boyer, would all have proved to be such, had the compression been thus applied. Much depends upon the ingenuity and contrivance of the surgeon, in successfully applying and varying this treatment. If compression be resorted to, and carried out according to the pathological indications I have adopted, and according as the varied circumstances may demand, I believe it will be found to be generally successful in the treatment of Aneurisms, in punctures of large arteries, and of divisions of those of smaller calibre. It could hardly promise success in the complete division of a large artery, for the artery in such a case must be closed; and the degree of pressure to do this, would rarely be endured for sufficient length of time to cause its complete occlusion. But for the other cases, I have no hesitation in giving it as my opinion, that compression is the best method of treatment.

ART. VI.—*Hernia cured by a Blow.* By ALBAN SMITH PAYNE, M. D. (Communicated in a Letter to the Editor.)

Paris, September 5th, 1847.

MR. EDITOR,—The only apology I shall offer, in noticing the following case of Hernia, is my firm belief that it possesses some peculiarities, which have a direct practical bearing upon the rational treatment to be employed in the radical cure of these cases. I think it also offers us some little insight into the ways and means, by which nature seeks to relieve herself of these deficiencies. It is a case affording peculiar interest to me, as it appears to prove my treatment to be based upon sound physiological laws. At the same time it demonstrates to a certainty, the theory I have always believed and advanced to be correct. It is always truly gratifying to one, to find his treatment of disease harmonizing with the laws of nature, and supported by pathological investigations.

With these remarks, I will proceed to state the case as briefly as possible. Lewis H., having heard of my success in treating rupture, consulted me, giving this history of himself: is æt. 41, stout, and robust, generally healthy, of sanguineous temperament, blacksmith by trade. After a powerful muscular effort, 22 months ago, felt something give way; and his bowels came down. His physician at the time placed upon him a common truss with a large pad; which he was wearing when I first saw him. Has had occasion to have his bowels reduced several times. Upon examination I pronounced him laboring under oblique inguinal Hernia of the right groin. By careful examination, I ascertained the aperture to be of sufficient size to admit the point of my little finger. I told him the truss he was wearing was only intended to prevent his intestines from falling out. Explained to him why it was it could only prove a mere palliation, and could never effect a complete cure. That for my part, I deemed it a dangerous palliation. That he was likely at any time to have serious trouble.

I informed him that if I had anything to do with his case, I should attempt its radical cure; and in so doing I would have to exert pressure sufficient to excite adhesive inflammation, and he must expect to be subjected to some pain. He promised to go by my directions. For want of a better apparatus, I took an ordinary truss, capable of exerting considerable pressure; to its large pad I made fast a piece of cork, covered with buckskin, which I took care to have just the size to close the aperture, fully and tightly. If the patient will keep the horizontal posture, a common bandage answers a better purpose, as you can with it more easily regulate and graduate your pressure, rendering it more uniform. Thus regulated, I placed upon him my contrivance: the same night it commenced to pain him, he displaced it, and betook himself to his old friend again. A few days after, when in the act of lifting the hind foot of a horse he was about to shoe, the horse let fly his heels, and struck him just over the pad of his truss. I did not see him until 12 hours after the accident; I found him, as it were, in "articulo mortis." Intestines down, and immensely swollen; pulseless at the wrists and ankles, countenance of a pale ashy hue, bathed in a cold,

clammy, sour perspiration, occasional hiccough was the chief sign of life, quantities of his fæces and contents of stomach covered the floor beside the bed upon which he lay. At first, I doubted whether I should be justifiable in delaying to give taxis even a trial; but proceed at once to the operation, as I feared sphacelation of the gut had already taken place. But things being badly arranged for an operation, I concluded to make the attempt at reduction. I was happily disappointed, my attempt proved successful, and almost instantly there was a manifest amelioration of the fearful symptoms. His system rallied nobly. His pulse began to rise. His countenance cleared away. The cold, clammy perspiration began to subside, and he dropped into a sound, quiet sleep.

That night, re-action reached its acme. I do n't think I ever witnessed a more intense degree of inflammation than supervened in his case. I combatted the inflammation energetically, and decisively. I had to bring to bear upon him all the most powerful antiphlogistic agents, to keep him from slipping through my fingers. But fortune smiling, I brought him through. When he was able to leave his bed, I found his rupture radically cured.

From the above case, and many others, which I have successfully treated, I believe myself justified in deducing the following conclusions. 1st. That almost all cases, (provided you have any stamina of constitution,) can, by judicious treatment, be radically cured. 2d. That some physicians, beholding in inflammation the most terrible of all phantoms, fail to relieve many cases, in which a little boldness would be successful. 3d. I come to the conclusion, from the above case, that adhesive inflammation, and ordinarily inflammation, differ only in degree of intensity. 4th. That adhesive inflammation is not, as Sir John Hunter supposed, "sui generis." I fear something like the following too often occurs. A patient finds himself ruptured, consults his physician as to what he must do. "Is advised to wear a truss." No attention is paid to the size of the aperture. None to the pads being of the exact size, to snugly close it. There is no regulation of the pressure. He follows his instructions, and "wears a truss." The first time he makes a muscular effort, or misstep, down come the intestines. His physician is called, they are reduced, and on goes the same truss again. This is repeated, oft repeated, until at last, his physician is out of place; none can be had, strangulation takes place, and the poor patient succumbs, never dreaming of his affliction being subservient to art. Should this be so? In my humble judgment, the radical cure should always be attempted, and will, I think, rarely fail, provided you close with the pad the aperture, fully and tightly, and firm uniform pressure be applied. By this means, you are sure to get up the so called "adhesive inflammation," and the hole is closed. If I am correctly informed, Mr. Golding of your city has invented a truss, calculated fully to meet these ends, and to obviate all the defects and deficiencies of the ordinary truss. If so, it will prove of infinite service and convenience, not only to the practitioner, but will greatly add to the comfort and safety of the afflicted. He well deserves the thanks and patronage, not only of the profession, but the public at large.

And now, Mr. Editor, with your permission, I will offer a few remarks upon "trusses," "the mode of applying taxis," "treat-

ment of Hernia, etc." The pads of all the trusses of the present day are too large, much too large; varying from the size of a hickory nut to a man's fist. Now it is rare you find the aperture larger than cleverly to admit the point of your finger, unless in old, flaccid, broken-down constitutions.

A truss with pads too large to close the hole tightly, often do more mischief than good. In this way. The main-spring becoming weakened by use, and the pad not fitting the aperture, frequently in stooping allow the mass partially to protrude; on the patient's suddenly assuming the erect position, the pad catches, and crowds the mass against the parietes of the abdomen, frequently bruising them, and running the risk of mortification. Some physicians are well satisfied with palliative treatment. With me it is the dernier ressort. When I have tried everything likely to complete a cure, and fail, then I am content with palliative treatment; and not until then. Too much attention cannot be given in the manner of applying taxis; little or no force should be used. Too much force, I am satisfied, often produces what is very charitably laid at the door of the "mass being down too long." My maxim is, no force, and a deal of patience. After resorting to many modes of taxis, and apparently with making no progress, I have found, that by receiving the mass in the palm of the hand, and using a screwing, grinding motion, the mass to return, with that peculiar gurgling sound. In reducing Hernia, my chief reliance for assistance is in the warm-bath, and ice, just as the one, or the other, seems indicated. It is true, venesection may be sometimes necessary. The tartras antimonii et potassa, if used, should be so with circumspection, as we are apt to have nausea and vomiting sufficient, independent of its use. Tobacco I would never use, for these considerations: 1st. We can form no just idea of the prostration it may induce; that is, its effects upon the system are too uncertain. 2d. If the patient has to submit to the operation, he will bear it badly, or rather, re-action is too much enfeebled by its exhibition. After I have given taxis, in all its modes and phases, a fair trial, and it availeth not, my rule is to cut,—paying but little attention to the various membranes and coverings I pass through, but relying, mainly, upon my knowledge of anatomy, and common sense, to carry me through.

Did time allow, and were I not fearful of its being objectionable to you, I should be pleased to institute a comparison between the human system and the "United States." I should assume, that the nerves are nature's "telegraphic wires." The arteries and veins, her avenues of transportation, etc., etc. By carrying on the analogy further, I could at least draw some amusing and theoretical conclusions. Now, what does strangulation of a part imply? Is it not a part so constricted, as to be cut off from all "telegraphic connection," from all nervous supply, with its fellow-parts, and of course receiving no support, must perish, and die for the want of "nervous stimulation?" So an army, surrounded, and cut off from all supply of raiment and provisions, if not soon relieved, must perish for the want of sustenance, for from food man draws his main supply of nervous stimulants. A few more playful remarks, Mr. Editor, and I have done. I imagine something like this takes place, when a strong truss is placed over a rupture. By my firm pressure, I trespass upon nature's ground; she feels it, and being incensed, she prepares to resist my

interference. She feels, and transmits her excitement through her "telegraphic wires," the nerves. Her nervous system, thrown into tumultuous action by my pressure, transmits the excitement to the whole system. The nerves, nature's trusty messengers, soon marshal her forces, and quickly bring them into the field of action. The arteries and veins, her principal avenues of transportation, hurry along their quantum in the shape of fibrin, albumen, etc. And it is even contended by some writers, that upon the journey, the fibrin and albumen occupy different positions in the vessel. The lymphatics likewise, being apprised of the trouble by the "telegraphic communicants," and becoming excited, send along and pour out the necessary quantity of "plastic lymph." With these forces and ingredients upon the ground, nature is prepared to commence operations. The phenomena of coagulation, organization, separation, and resolution, is quickly gone through with, and you have the chink closed. There is still something yet left for nature to do. There has been a surplus of material, a rubbish, left over, which by exerting pressure upon her "telegraphic wires," excite them; again they give the signal for help. The absorbents respond to the call, come to their work nobly. They soon take up all surplus material, all rubbish. The excitable nerves being no longer interrupted, or imposed upon, regain their lost tranquillity, and "quiescat in pace."

ART. VII.—*Description of the Bloomingdale Asylum for the Insane, and the System of Moral Regimen pursued in the Treatment of its Patients.* By PLINY EARLE, M.D., Physician to the Asylum.

SECTION 1st.—*Of the Farm and Buildings.*—The Bloomingdale Asylum for the Insane is within the limits of the municipal jurisdiction of the city of New-York. It is on 117th-street, between the Tenth and the Eleventh Avenues, seven miles N. N. E. of the City Hall, and about a quarter of a mile from the banks of the Hudson river, which it overlooks. It is upon one of the most elevated hills, known in history as the Harlem Heights, and commands a prospect, which for extent, variety, and beauty, is rarely equalled.

The farm contains about fifty-five acres, and is bounded, on its western side, by the Bloomingdale road. About thirty acres of it is under high cultivation, portions being devoted to grass, vegetables, and ornamental shrubbery.

The part last mentioned includes a liberal space, which is laid out and planted in one of the most approved styles of English gardening. This having been done in the earliest years of the institution, the trees, of which there is a great variety, have many of them attained their full growth; and as, from year to year, deficiencies have been supplied and the variety increased, the grounds will favorably compare with most in the country. In short, there are but few upon this side of the Atlantic which bear so strong a resemblance to the beautiful homesteads of the wealthy, in the rural, cultivated districts of England.

In thus perfecting this part of the establishment, the governors of the institution have adopted, and faithfully pursued, that system of moral regimen essential to the best interests of the insane, by avoiding, as

far as possible, the aspect of a prison, and surrounding the buildings with agreeable prospects.

The principal edifice is constructed of reddish-brown freestone, smoothly hewn. It is three stories high, besides the basement and attic, and consists of a central portion and two wings, the united length of which is two hundred and eleven feet. The central portion contains the offices and the private apartments for the officers. The wings are occupied by patients; that on the west by men, and that on the east by women. On each floor of either wing, a hall or corridor, ten and a half feet in width, extends the whole length through the centre, having apartments upon both sides. One large room, at the extremity of the hall, on every floor, is used as a sitting and dining-room. The others are lodging rooms of different dimensions, sufficient to accommodate from one to four beds each. There is also a room fitted up as a wardrobe, and one as a water-closet, on every floor in each story of the wing, besides a bath-room on the second story.

Parallel with the western extremity of this edifice, and about one hundred and fifty feet in its rear, there is another building, constructed of brick, fifty-seven feet long, thirty-two feet eight inches wide, and three stories high. The corridors are ten feet wide, and the rooms are mostly of uniform size, being nine feet two inches in length by seven feet two inches in width. In the rear of the eastern extremity of the principal edifice, and parallel with the building just described, stands a third, the basement of which is a laundry, while the upper two stories are occupied by female patients. It is sixty-six feet six inches long, by thirty-eight feet wide. The corridors are nine feet six inches wide, and the patients' rooms nine feet six inches long, by six feet six inches wide.

There are six bathing rooms in the establishment. Two of these have already been mentioned. There is one in the basement of each wing of the principal edifice, and one in each of the smaller buildings.

The water used in the Asylum is obtained from wells and springs, together with what is collected from the roofs. Several subterranean cisterns, and six tanks in the attic of the main building, each holding thirteen hogsheads, are the reservoirs for that which is collected from the source last mentioned.

Every department devoted to patients is heated by air furnaces, with the exception of the sitting and dining rooms in the principal building, in each of which there is a coal fire, in either a grate or a stove. Coal is the principal fuel used in the establishment. The annual consumption is about two hundred tons. Most of the water used in domestic purposes, and all that is used in the washing of clothes, is heated by steam.

There are two kitchens: one for the officers, the other for the use of the rest of the household. Fourteen tables are set at each meal; one for the officers, ten for the patients, and three for the domestics.

The principal out-buildings on the premises are a barn, including stables and carriage-house, an ice-house, and a green-house, or conservatory. The barn is large, and built of stone in the most substantial manner. The green-house contains about seven hundred plants, many of them rare and beautiful exotics.

Section 2.—*Moral Treatment.*—1st. *General Remarks.*—In the moral regimen adopted at this institution, every practicable effort is made to pursue that system, at once gentle, philosophical and practical, which

has resulted from the active and strenuous endeavors of many philanthropists, in the course of the last half century, to meliorate the condition of the insane. The primary object is to treat the patients, so far as their condition will possibly admit, as if they were still in the enjoyment of the healthy exercise of their mental faculties. An important desideratum for the attainment of this object is, to make their condition, as boarders, as comfortable as possible; that they may be the less sensible of the deprivations to which they are subjected by a removal from home. Nor is it less essential to extend to them the privilege or the right of as much liberty, as much freedom from personal restraint, as is compatible with their safety, the safety of others, and the judicious administration of other branches of curative treatment. The courtesies of civilized and social life are not to be forgotten; tending, as they do, to the promotion of the first great object already mentioned, and operating, to no inconsiderable extent, as a means of effecting restoration to mental health.

The means generally included in what is termed moral treatment, although many of them operate upon the mind by increasing the physical activity and energy, will be described under their respective heads.

2d. *Manual Labor.*—Some employment for the hands, of a description requiring a degree of exercise of the body sufficient to preserve and increase the activity and vigor of all its organs, as well as to promote sound and healthful sleep, is acknowledged, by all who are conversant with the treatment of insanity, as it appears in public institutions, to be the most effectual of all restorative measures not purely medical. Hence, some physicians have recommended compulsory labor in cases where the patients will not engage in it voluntarily. At this asylum, the patients are advised, and if possible, induced to apply themselves to some useful occupation, but no compulsory measures are resorted to for the purpose of enforcing it.

A very large proportion of the inmates are from the classes unaccustomed to manual labor. These, with very rare exceptions, will never commence any employment of the kind while at the Asylum.

Another large class of the patients are mechanics and artisans from the city, unaccustomed to any occupation other than that to which they were bred, and facilities for pursuing which cannot, in most cases, be furnished here or at any similar institution.

Finally, of those who are acquainted with, and habituated to, such kind of labor as can be furnished here, a considerable proportion are rendered unfit to work by their disease; and others, though able, will not work, because, to them apparently the best of all reason, they pay their board.

With all these adverse influences, it cannot be expected that, in an institution accommodating but about seventy of either sex, the number should be large who devote any considerable portion of their time to labor. There are some, however, who work upon the farm, others in the carpenter's shop the kitchen, or the laundry; while numerous small jobs about the establishment furnish employment to a considerable number of the men.

A much larger proportion of women than of men labor voluntarily, not only because all classes of women, in this country, are, with but few exceptions, taught to use the needle, but because this species of

labor is one which can be introduced into the apartments of the patients.

Could some light occupation, requiring but little mechanical ingenuity or skill, be carried on in all the wards of the men's department, the number of laborers on that side might be materially augmented.

3d.—*Religious Worship.*—It is believed that the first attempt, in the United States, to hold a meeting for religious worship in an institution for the Insane, was made at the Lunatic Asylum adjoining the New-York Hospital,—the building for which the Bloomingdale Asylum was erected as a substitute. On the 31st of August, 1819, the Rev. John Stanford, a venerable divine who will long be remembered for his active benevolence, preached a sermon to the inmates of that institution an occasion to which he alludes in the following manner, in the writings published in his memoir:—

"About forty of the most composed of the patients were assembled; and several of the governors, the physician of the house, and the superintendent of the Hospital, attended on the occasion. The patients conducted themselves with great propriety, and many, of their own accord, kneeled while prayer was offered, and several expressed their thanks at the close of the service."

In the year 1832, a chaplain was employed at the Bloomingdale Asylum, and regularly, since that time, such patients as were suitable have assembled, on the Sabbath, for divine worship. With one hundred and forty patients in the Asylum, the average number in attendance is about eighty-five. Their deportment, with few and rare exceptions, is characterized by good order, decorum, and a regard to the proprieties of the place and the object of the assembly.

To a large majority of the patients, these services are beneficial. To a few, such as are very melancholy, disposed to excessive contemplation upon religious subjects, and hopeless of salvation for themselves, the tendency is thought to be injurious, and they are, consequently, not permitted to attend.

4th. *Recreative Exercise.*—a. *Importance of Exercise.*—A considerable portion of the insane are impatient of detention, and an abridgment of their personal independence of action. Another portion, quite as large, especially in institutions that have been in operation many years, are inactive, stupid, and disposed to be constantly sitting or lying down. To gratify the former, to rouse the latter, and as a hygeinic measure for all, it is intended, at this Asylum, that every patient capable of leaving the house shall have a certain degree of exercise daily out of doors. Hence, after the morning visit of the Physician, and again after dinner, such patients as are allowed the liberty of the premises, go out unattended, and all the others in the men's department are transferred to the airing courts or yards.

b. *Airing Courts, or Yards.*—There are three of these courts for the men, and four for the women. They are, with one exception, well shaded with trees, and three of them have large bowers covered with roofs, and furnished with seats for all the patients admitted into the courts.

An opinion unfavorable to airing courts has been expressed by several eminent Physicians connected with Asylums in the United States. The principal objections which have been urged against them are, first, their prison-like aspect; and, second, the patients admitted into them are liable to lie upon the ground, and thereby injure their health.

The first objection is easily answered. The airing courts at the Retreat near York, England, at the York Lunatic Asylum, and at some of the other institutions in Europe, have a much stronger resemblance to a beautiful garden than to the yard of a penitentiary. It is an old adage, true as trite, that "what man has done man may do," and if the courts of foreign institutions can be made so cheerful and attractive, there is no obstacle sufficient to prevent the attainment of the same object in the United States.

The second objection may be as easily met. At this Asylum, the courts occupied by the men are kept constantly under observation, by an attendant whose time is wholly devoted to this purpose; and among the rules by which he is to govern his conduct, are the following:

"He must see that each patient has a hat while in the yard, and that the clothes of all are kept properly arranged, the pantaloons, vest, and shirt-collar buttoned.

"He must not permit the patients to lie on the ground while in the yard, but must endeavor to amuse, encourage and assist them in their games."

The Physicians who object to yards, or courts, advocate, as a substitute, open verandahs guarded by lattice-work, such as are found at the Massachusetts State Lunatic Hospital, and at some of the other institutions of this country.

It appears to us that, to the minds of the patients, these must be much more constantly suggestive of imprisonment, or confinement than a large, well-shaded, cultivated court. And it is presumed that no one will endeavor to maintain that the exercise to be obtained in a necessarily restricted space, upon a floor, can be so conducive to health, as that which is gained in a court of liberal dimensions, in the open air, and upon the ground.

The most approved and best of hygeinic or of curative measures may be badly managed; but it needs no argument to prove, that the abuse of a thing should prevent the use of it in a judicious manner.

c. *Walking.*—One attendant devotes his whole time, at suitable hours in the day, to walking with the men, over the premises and throughout the neighboring country; and all the attendants, of both sexes, are required to walk, daily, with some of the patients under their care. They frequently make excursions of several miles, visiting the Receiving Reservoir of the Croton Water, the High Bridge, or Aqueduct intended to convey that water over the Harlem River; the Trinity Church Cemetery, and other places of interest in the vicinity. In the proper season, some are permitted to go to the neighboring river to bathe or to fish.

d. *Riding.*—Two horses, and a carriage with seats for eight, are wholly devoted to the use of the patients. The carriage goes out regularly, in suitable weather, from two to four times a day, taking the patients in rotation. It goes from six to eight miles at each excursion, the direction being varied as much as the many roads and streets in the vicinity will allow.

5*th. Instruction.*—a. *Lectures.*—Soon after the writer of this article first directed his attention to the treatment of the insane, he became convinced that lectures, upon scientific and miscellaneous subjects, might be made an object of interest, as well as of utility, in the moral treatment of patients in public institutions. Accordingly, being at

that time connected with the Frankford Asylum, near Philadelphia, he induced the managers of that institution to purchase an air-pump, and other philosophical apparatus; and with the aid of these, he gave a series of experimental lectures before the patients, in the winter of 1840–41; and again in the winter of 1841–42. The results were as favorable as had been anticipated.

The writer became connected with the Bloomingdale Asylum in the spring of 1844, and in the autumn of the same year, encouraged by the governors, who made a liberal appropriation for the purchase of the apparatus, commenced a course of lectures, which were continued through the winter. The success was sufficient to induce perseverance in the plan, and a similar course has been delivered in each succeeding year, since that time. The last course commenced on the 12th of October, 1846, and ended on the 3d of May, 1847. It consisted of thirty-eight lectures, viz.:

Natural Philosophy,	four	Lectures.
Chemistry,	six	"
Animal Physiology,	nine	"
Astronomy,	ten	"
Physical, Intellectual, and Moral Beauty,	two	"
Recitations of Poetry,	one	"
History and description of Malta,	two	"
Greece as it was in 1838,	two	"
Characteristics of the Americans and Europeans,	two	"

The subjects were illustrated with suitable apparatus, of which the following is a schedule:

1st. An air-pump, with its accompaniments.

2d. A set of mechanical powers.

3d. A magic-lantern.

4th. An Orrery.

5th. An electrical machine, with its implements.

6th. Pneumatic trough, receivers, retorts, and other articles used in chemistry.

7th. One hundred and forty-six diagrams, painted upon bleached muslin, illustrative of the structure of the human frame, and that of the lower orders of animals.

8th. Twenty similar diagrams, explanatory of the laws and phenomena of light.

9th. Twenty-five astronomical diagrams.

10th. One hundred diagrams, illustrating various subjects.

The lectures were delivered in the evening, and attended by an average number of about seventy patients Their attention and deportment would compare favorably with that of the audiences ordinarily attendant upon lectures.

It will be perceived that such subjects were selected as are susceptible of demonstration or illustration, experimentally, or through the medium of diagrams. Such topics are considered as the most suitable, inasmuch as the perceptive faculties are called into action, by addressing the eye, as well as the ear. As a general rule, this holds good; but of all lectures mentioned in the foregoing list, it is believed that none commanded more profound attention, or gave more general satisfaction, than that which consisted of the recitation of poetry, with

remarks upon the character of the pieces, and upon the authors by whom they were written.

As a simple method of exerting disciplinary restraint, simultaneously, over a large number of patients, a means of fixing the attention, and withdrawing the minds of comparatively a multitude from the delusions incident to their disease, we believe there is no plan, hitherto adopted, in the system of moral treatment, which will prove more generally and extensively useful, than that of judicious and well-managed lectures.

b. *School.*—In the autumn of 1845, a school was commenced in the men's department, and continued until the following spring. It was suspended during the summer, but again opened, and kept during the winter of 1846–7. It was attended by from twenty to thirty patients, of various ages; and in a diversity of conditions, in regard to mental disorder. The ordinary English branches were taught, and in these a few of the younger patients made some progress. Others reviewed what they had previously studied, and others interested, or amused themselves, by reading from entertaining books, and newspapers.

It is not to be expected that any considerable advancement in valuable knowledge can ever be attained in a school for the insane. The only object within reach, and the only one which need to be expected,—and this indeed is much,—is that of extending a moral control over large numbers at once; of subduing excitement, rousing the inactive, and giving a new current to the thoughts.

c. *Library.*—A miscellaneous library, of about a thousand volumes is devoted to the use of the patients; and five daily and eight weekly newspapers, two monthly magazines and four quarterly reviews are also taken for them. Thus an inexhaustible fund of reading is supplied, and a librarian distributes it to such patients as are disposed to make use of it.

6th. *Amusements.*—a. *Games.*—Facilities for various diversions are afforded to the patients. A bowling alley, or nine pins, holds the first rank among the means of this species of moral treatment, whether we regard its utility, or the number of patients who resort to it for amusement. The interest of the game renders it sufficiently attractive and absorbing; while the physical force required, gives a considerable amount of wholesome exercise. Quoits, the bat-ball, the foot-ball, and swing, are the other principal means of amusement out of doors.

For amusements in the house, bagatelle, the battledore, the graces, chess, checkers, backgammon, cards, and various other games.

b. *Music.*—A piano, a viol, a violin, a bugle, a drum, flutes and fifes, are at the command of such as have a taste for music.

c. *Parties.*—On one evening in each week, during the cold season, the convalescent and convalescing patients, to the number of from ten to fifteen of each sex, are invited into a parlor, in the central building, where, in company with the officers, they pass a few hours sociably, or engage in such games as may be introduced. Refreshments are supplied, and in this, as well as in other respects, these parties differ but little from similar assemblies in private houses.

d. *Dancing.*—On one evening in each month, during the cold season, there is a cotillion party, or ball, attended by from sixty to seventy of the patients. No means of entertainment gives more general satisfaction than this; and upon the class of persons admitted here, its general influence is evidently beneficial.

6th. *Restraints.*—Since the establishment of this institution, the opinions of those concerned in the management of the insane have passed through a variety of phases, in regard to the extent to which corporeal restraint and other coercive measures are necessary, in the proper management of patients. From the ultra ideas of the old *regime*, in which the discipline of an institution of this kind was almost identical with that of a common jail,—and in some instances even worse,—there has been a gradual, but constant mitigation of severity, in both theory and practice, until the opposite extreme has been reached, and the doctrine of the entire abolition of the use of restraining appliances for the body, or limbs, has been promulgated as that which alone is compatible with the true interests and the judicious treatment of the insane. Keeping pace, to a certain point, with this progressive sentiment, and directed by the surest of all guides, the light of experience the executive officers of this institution have, gradually abandoned the more exceptionable forms of restraint, and more rarely resorted to those of a milder character. They have never, however, become proselytes to the doctrine of the absolutely entire disuse of all restraining apparatus. There are exceptions to all rules, which are not governed by the invariable laws of mathematics, or of moral right; and no argument, however subtle, or specious, or to appearances however strongly based, theoretically, upon benevolence, philanthropy, kindness, and the golden rule of doing to others as we would, under similar circumstances, that they should do unto us, can overthrow our belief,—founded upon the observation of several years,—that there are cases, in which the welfare of the patient and the dictates of true humanity require a resort to some restraining means. The truth of this proposition may be, and perhaps is, acknowledged by all. Yet those who, in their recession from left-hand defections, have, in our judgment, fallen into right-hand errors, assert that, in the cases alluded to, whatever restraint is applied, should be that of the hands of the attendants. To this substitute, or subterfuge, we cannot resort, knowing as we do the greater irritation produced in a patient by being held by the hands of attendants, than by having his limbs confined by mechanical appliances. In the former, mind struggles with mind; in the latter, with matter alone. The only means of restraint now used in the Asylum, are the Camisole, or long sleeves, leather muffs for the hands, and the invaluable apparatus, invented by Dr. Rufus Wyman, for confining a patient in bed.

The Camisole is, in nearly all cases, sufficient. During the last three years, the muffs have not been used in more than two or three cases annually, and in those for but a day or two, or at most, but a few days each. There was one period of thirteen months, during which restraint was resorted to but in two cases, in the men's department. In one of these, the patient, while in a condition of typhoid delirium, wore a Camisole three days; and in the other, the patient's hands were similarly confined, a few hours, to ensure the vesication of a blister.

We have found that the proportion of women, requiring restraint, is greater than that of men; and in this, it is believed that our experience coincides with that of physicians of other institutions.

In no less than three cases, in which there was prolonged and exhausting excitement, we are convinced that Wyman's bed apparatus has been the means of insuring sleep, and of saving the life of the

patient. It is a means of restraint with which every institution should be supplied.

8th. *Attendants.*—It requires but little experience, in an Asylum, to convince a person of the identity between a judicious, parental government, and that system of management which is best adapted to the insane. The motives, the influences, and, as a general rule, the means necessary for the good government of children, are equally applicable and equally efficient for the insane. In fact, this system is the great desideratum at every Asylum; and without it, it is impossible for the management to approximate that degree of perfection which it is desirable to attain.

The most essential element of success, in the establishment and maintenance of such a government, is a corps of intelligent attendants, of kind disposition, and good judgment. Such, and such alone, can sustain a disciplinary code, founded upon kindness, and supported with firmness.

Much pains have been taken at this institution to procure attendants of this character; and, especially as regards the men's department, the efforts have been rewarded with a good degree of success. Nearly all the young men who have been so employed, during the last few years, were from the country, and so well educated, that they had been accustomed to teaching school in the winter.

It is needless to describe, in detail, the numerous advantages of attendants of this kind, over those who are ignorant, and whose only ideas of exerting control over others, are measured by the strength of their arms. He who has once tried the former, would greatly deplore the exigency which should render it necessary to return to the latter.

Such are the principal facilities afforded for moral treatment at this Asylum. They are sufficiently extensive, if frequently called into requisition, not only to break the monotony of hospital life, and promote the contentment of the patients, but also, to effect much towards the accomplishment of the great object of the institution,—the reinstatement of reason upon the seat from which it has been dethroned.

ART. VIII.—*Remarks on the prevalent Diseases of the Counties of Chenango and Broome, New York, since the year* 1807. By AUGUSTUS WILLARD, M. D., of Greene, N. Y.

IN relation to the Hygeine of this part of the country, I send you some discursive notes, drawn partly from my own knowledge and observation, and partly from other sources. You are at liberty to make such use of them as you shall deem proper. I know nothing, of my own knowledge, of the diseases of the country previous to 1824. The sketch of diseases previous to that year, I have derived from Dr. Farr, an old and reputable practitioner of this town, who has now retired from business. He settled here in 1807; at that time the population of the town was about 1,000; it now amounts to 4,000.

Our observations refer chiefly to the south-western part of Chenango and the adjoining parts of Broome co. The counties of Chenango

and Broome are generally, and without doubt, truly considered as among the most healthy in the State. The surface of the country is hilly, but not mountainous. It is well watered by the Susquehanna, the Chenango, the Tioughnioughga, and the Otselic rivers, besides many smaller streams. The valleys are beautiful and fertile—the hills are susceptible of cultivation to their very summits, there are no malarious swamps and marshes to contaminate the air with their noxious exhalations—the water is very pure, and living springs are abundant.

During the first settlement of the country, Intermittents were very common, but were confined mostly to the rivers and valleys, while the hill country was almost or entirely free from them. In the year 1807, a biliary remittent fever prevailed to some extent, but did not prove very fatal. It had something of an active character, and the patients bore depletion tolerably well, and seemed particularly to require free cathartirizing. In 1808 an epidemic Dysentery made its appearance during the months of July and August; many cases were severe, and it often proved fatal, particularly under the then customary treatment, which was the use of liberal and frequent mercurial cathartics, given on the supposition that the disease was essentially of bilious origin. In the fall of the same year, an Influenza was very universal; it did not, however, prove fatal, except in some cases of aged persons. Influenza has also been epidemic here in the years 1824, 1837 and 1843. That of 1843 occurred in the latter part of June and July, and was very severe, but not fatal, except, as usual, among the aged.

In 1812, *the epidemic*, as it was called, made its appearance in the latter part of the winter and spring. It was extremely unmanageable and very fatal. This, I presume, was the same disease which at, and before that time, had appeared in, and overrun, the Eastern States, and was known there as the Spotted Fever. Here, however, the spotted appearance was not seen, but the disease assumed the shape of Typhoid Pneumonia; at any rate, the lungs seemed to suffer particularly. In the latter part of the summer and fall of 1813, a fever somewhat peculiar in its character prevailed. There were symptoms of biliary derangement, not much excitement, and a good deal of tendency to subsultus tendinum. The patients did not bear depletion, and on the whole the fever was decidedly typhoid, and may perhaps have partaken somewhat of the character of *The Epidemic* of the preceding year. It was also peculiar in its duration, which was not unfrequently extended to 35 or 40 days. It was not very fatal.

In 1814 an epidemic Dysentery again spread through the country, but there was nothing peculiar in its appearance or treatment, and its character was mild.

After this date the country was generally healthy. There were no epidemics of any description, except the influenza; occasionally, cases of inflammation of the lungs and other organs; sometimes a few cases of fever of a remittent type; and during the summer months, some few dysenteries and other ordinary summer complaints happened until the spring 1829, when, for the first time, the Scarlet Fever appeared; and since then there has been more or less of it every year. It has not however prevailed extensively since four or five years after its first advent, and seems, on the whole, now, to have almost entirely disappeared. The first case of the disease was in the town of Coventry, in a remote section of the town, far removed from any travelled thorough-

fare, and in a family which had been always healthy, and had in no way been exposed to any influences which would at all tend to give rise to the disease. There can be no doubt that it was entirely of spontaneous origin, without the least reference whatever to the matter of contagion in any form. It has never seemed to me to be any more contagious than our ordinary fevers. It was mostly confined to children, although some adults contracted it. Sometimes it would run through a whole family, sometimes part of a family would have it and the remainder would escape, perhaps for months, and then be taken with the disease; sometimes a single one in a large family would come down with it, and the rest escape entirely. It seldom happened that the disease occurred twice in the same individual, but such instances did occasionally happen. The disease has never been so extremely severe and fatal here, as it is said to have been in many places, although there have been not unfrequently deaths from it. The treatment has varied from year to year, as the disease showed different phases. I believe that during the first year or two of its prevalence, a more active treatment was required than has been necessary since. Some years it has been quite mild, requiring little or no treatment.

About the time the Scarlatina made its appearance, there seemed to be a peculiar tendency to eruptive diseases. Measles were common, and in many instances it was extremely difficult to distinguish it from scarlet fever, so much did they in the general appearance of the eruption, and the affection of the throat, resemble each other. The smallpox, too, broke out in several places about the country, in which it was said no exposure to the disease could be traced. This was about the beginning of the winter 1830–31. In one instance it seems almost certain that there had been no exposure; it is certain that none could be traced by the most particular and minute inquiries. It appeared in a middle-aged man who had not been away from home for weeks; he lived remote from any public place, and his daily business was half a mile from any road, or any neighbor; he died of the disease; many persons contracted it from him, but I think it did not prove fatal in but one other instance. This case led to a harassing lawsuit; one of our physicians having been accused of communicating the disease to him for the worst of purposes, so that there was a necessity for discovering, if possible, its origin. There are no effects without adequate causes. Time was when a certain catenation of circumstances produced the *first* case of smallpox: why might it not happen, that in the course of events the same catenation might not again take place, producing the like effects?

The Asiatic Cholera did not visit us. There was but one case of it within my knowledge, and that was imported from New-York. The individual recovered, and no one else had the slightest symptom of it.

I do not know that any particular disease can be said to be endemic to this location. We have more or less cases of fever of the remittent form, approaching the typhoid, every year; but it is seldom general enough to say it is a *prevailing disease.*

It is perhaps a little curious, that ordinarily, fevers are more common and more severe on the high grounds than along the rivers. I have never known, for the last 20 years, fevers to prevail, to any great extent, along the valley of the Chenango, except perhaps in one or two limited districts; while on the hills, where one would most naturally

look for healthy locations, there have been instances of severe and unmanageable ones appearing. For instance, in the town of Coventry, which occupies the high ground between the Chenango and Susquehanna rivers, fevers have been frequent and fatal.

Perhaps the most frequent diseases are those of the lungs, and there is one among them which may perhaps be looked upon as the scourge of the country. I allude to Consumption. I have no doubt but one fourth of all the adults who die in this town, die of this disease; nor can there be any doubt that the disease is fearfully on the increase, and in a far greater ratio than the population is increasing. I am credibly informed, that forty years ago the disease was comparatively rare; not more than one in ten adults dying with it. I am unable to give any reason for this terrible increase of the disease. It might perhaps be looked for in the changeableness of the climate; but after all, this would only be a *cause* of the complaint, and not of its *increase*, for I suppose the climate has not essentially varied for the last forty years. Perhaps there is no part of the State where the extremes of temperature are greater than here. I have known a variation of 50° Fahrenheit in a few hours, and I have seen the mercury 36° below zero in winter, and I have known it in the summer to stand at 98°, making a range of 134°.

There may be something in the climate that disposes to Scrofula, for I am induced to believe that that state of the constitution is rather of common occurrence. Goître was formerly seen pretty frequently, but for some years past it seems to be disappearing, while Consumption appears to have replaced it. There is another disease which is becoming rather common, and is at all times difficult of management. It is the "Nursing Sore Mouth." Whether it is more frequent here than in many other places, I do not know, but of this I am certain, that it is more frequent in this town than in any other in the country. This is not the proper place to go into the pathology and treatment; both, however, are sufficiently obscure.

You will perceive, from this sketchy and imperfect article, that the diseases of this locality have not very greatly changed since the country has been fairly settled. Intermittents, the "growth and produce of the country," have almost entirely disappeared; it is rare that a case is found, except in one neighborhood where local causes give rise to it. Consumption is on the increase without doubt, and I think that "Nursing Sore Mouth," (perhaps I should call it Anemia,) may, on the whole, be called *new* to the country.

I take the liberty to send you a copy of a printed document in my possession, which may perhaps be a matter of curiosity, if it be of no further use to you, as showing the health of the "*Genesee Country*," nearly fifty years ago. The paper was handed to me by Mr. Cameron, an old gentleman residing in this place, who was at the time an assessor of one of the towns, and engaged in getting up the statistics. It was done by the direction and at the expense of Charles Williamson, Esq., agent of the Pulteney estate, for the purpose of showing the health of the country; as a report had got abroad that it was very unhealthy. This report, of course, very seriously interfered with the settlement of the country. The county of Ontario, at the date of this document, comprehended the whole of the State west of the "Pre-emption line," which was a line drawn from Sodus Bay on Lake Ontario, southerly through, or nearly through, Seneca Lake, about a mile east of

Geneva, to Pennsylvania line, with the exception of the county of Steuben, which had been erected the year previously. Several of the towns named in this paper, you will perceive, do not now exist; and I have endeavored, so far as I am able, to note some of the towns which now occupy their places. I may be mistaken in some instances, but I believe I am pretty generally correct.

I have copied the paper, verbatim et literatim, except that I have in a few instances mended the orthography of the diseases where the misspelling was perfectly evident. In one instance I have altered the word, though I am in doubt about what it does mean. In the towns of Jerusalem and Hartford you will find one reported to have died of Hydrops; the word in the original is spelled *Hychops;* this may mean *Hiccups*, for aught I know. Please take your choice of the three terms.

[Want of space compels us to omit this Table.]

ART. IX.—*On the Use of Nitrate of Silver in Acute Laryngitis.* By T. R. VARICK, M. D., New-York.

I WAS called on the morning of June 18th, 1847, at 7 o'clock, to see Mrs. E.,—æt. 40, who was said to be choking to death. On repairing to the place, I found her in the following condition: face pale and bedewed with a cold perspiration, countenance anxious, respiration difficult, she appearing to be on the point of suffocation, speechless and unable to swallow. The fauces had a slight inflammatory blush, and the tonsils were slightly enlarged, pulse full and about 100, tenderness on pressure over the thyroid cartilage.

On making inquiries concerning the case, I ascertained that she had been laboring under "a bad cold," since the Monday previous, (this being Friday,) which she had contracted by exposure, while following her occupation, that of washing. The prospect was truly appalling. From her inability to swallow, I was deprived of a resort to the usual remedies. The first thing that occurred to me was Tracheotomy; but, before resorting to that, I determined to try the effect of the topical application of a solution of the Nitrate of Silver. I accordingly procured the folowing:

R. Arg. Nitrat. ℈ii. Aq. Distillat. ℥j. M.

This solution I passed, by means of a sponge attached to a curved bougie, through the rima glottidis into the larynx. The application was followed for a short time with a good deal of spasm. I followed the application with a blister placed immediately over the thyroid cartilage, and ordered twelve leeches to be applied over the upper bone of the sternum. In this state I left her. I called in in about three hours, and found her much relieved. The blister had not drawn, as it had become displaced by her continual tossing, and the leeches had not been applied, on account of her being unable, from her extreme poverty, to procure them. She could now speak in a whisper, and the power of deglutition had returned. I repeated the application, and put her on tart. antimony, in nauseating doses. I also bled her to the extent of eight ounces, the blood having a highly-buffed and cupped appearance.

3 o'clock, p. m. The blister has drawn well, symptoms continue to

improve. The antimony has vomited her twice; stopped it, and ordered calomel in doses of two grains every two hours.

I called the next morning and found the progress to a cure uninterrupted; she complained of a bad taste in the mouth, which was no doubt occasioned by the mercury. Ordered,

℞. Ol. Ricini, ℥j.

I also re-applied the solution. She afterwards continued to improve, and was discharged the next day without farther treatment.

Remarks.—The details of the preceding case furnish two points for consideration. 1st, How much had the nitrate of silver to do in the cure? And, 2d, What part did the other treatment play? 1st, How much had the nitrate of silver to do in the cure? In the consideration of this point, I think it well to review the condition in which I found her, viz.: gasping respiration, unable to swallow or to speak, slight inflammatory blush about the fauces, with some enlargement of the tonsils. As the power of deglutition was lost, she could take no internal remedy. Her case demanded prompt and energetic treatment. It will be seen, by referring to the record of the case, that the application was made three hours before any other remedy was brought into operation; during which time the power of deglutition had ret rned, as had also that of speech, and the relief afforded the respiration was immense. In the record of two cases of croup, treated in this manner by Dr. Blakeman of this city, (vide N. Y. Journal of Medicine, vol. viii., p. 209,) the effects were produced in a different manner from the one in which I employed it. On referring to the record mentioned above, we see that it was followed by free vomiting, in both instances; and in the first case, where it was used as a "dernier ressort," a large quantity of false membrane was evacuated. In my case no such effect followed, but great relief was the result, and that, more particularly on its first application, which must be borne in mind, was three hours before anything else was made available. Dr. Horace Green, who has practised, and still continues to practise, this treatment in chronic laryngeal affections with great success, has also applied it to acute cases. The effect of inflammation situated in the neighborhood of cellular tissue, is to produce abundant effusion into it, as we see in Erysipelas; and as we know of the efficacy of *the application in the latter disease, in subduing inflammation and promoting absorption,* why may it not come into general use in laryngeal disease, particularly of an acute character, as the two, viz., erysipelas and laryngitis, must be considered in many instances similar, if not identical: for, is not the mucous membrane a continuation of the skin? Is it not subject to many of the same diseases? Will it not, on being exposed to the action of the air, and deprived of its natural covering of mucus, become converted into ordinary integument? Again, may not laryngitis be viewed as a species of erysipelas? Such is the opinion of Mr. George Budd, who advocated the doctrine in a paper read before the "Royal Medico-Chirurgical Society," (vide London Lancet, vol. v., p. 520). The local application of a solution of nitrate of silver to the interior of the larynx was at one time laughed at; and attempts were actually made to demonstrate, from anatomical preparations, the impossibility of the undertaking, and after its practicability had been fully established.

The next thing advanced was, that it could be productive of no benefit; or, at least, that it might be used without any harm.

2d. What part did the auxiliary treatment play? On looking at the list of remedies employed, we see that the most active agents were resorted to: viz. tart. antimony, blistering, bleeding and calomel; remedies which have been in use for years, and which are universally employed in diseases of this character. It may be advanced, that the cure was principally effected by the latter remedies employed; but with all, holding this opinion, I differ; for, to what are we to ascribe the return of the powers of deglutition and speech, and the great relief to the dyspnœa, before any other means produced their effect? Surely not to the recuperative powers of nature. We know that there is no "let up" in this disease, particularly when advanced to the stage this had, that of "œdema glottidis." It may be asked, why was not general bleeding resorted to in the first instance? My reason for not doing so is, that the disease had advanced beyond its first stage, and all the powers of the system were required to carry on respiration; and I consider that as she was very much exhausted, general depletion would have added but injury, by still farther reducing the muscular power that was necessary for the performance of the all-important function. The conclusions that may be adduced are the following:

1st. That the nitrate of silver was the principal agent in saving the woman's life. 2d. That although the cure was no doubt accelerated by the auxiliary treatment, we have reason to suppose that the progress to a favorable termination would have gone on equally as certain, although perhaps not quite so rapidly. 3d. That the use of the local application of the nitrate of silver may be considered a powerful remedy in acute laryngeal and tracheal affections. 4th. That it may be used with benefit at the commencement or at any subsequent period of the disease.

ART. X.—*On the Source and Influence of Malaria in the South-west.* By Dr. A. G. LAWTON, of Marshall, Missouri. (Continued from vol. ix., page 57.)

IT was the opinion of Labaraque, that the effluvia arising from decomposing animal matter had no deleterious influence on the human constitution; in support of which, able proof is adduced. (Journal of Foreign Medicine for 1828, vol. ii., page 381, E. Littell, Phila.)

This also was the opinion of Bancroft, and some others. Whatever combination of circumstances might be necessary to produce this poison, one thing is certain, that is, that water is one of the elements always necessary to its production; and that the water must be in small quantities, is evident from the fact, that the earth sends forth this effluvia in the greatest abundance in the last stage of its drying. I do not believe that decomposing animal matter will always necessarily produce it, for it requires a union of elements brought together under certain circumstances, implying a certain degree of heat, moisture, and matter, aided by a slow grade of decomposition, in order to the perfect development of this deleterious effluvia; hence Labaraque was right when he said as above quoted, he having reference to the *rapid* decom-

position of dead bodies, for here we do not have the manner of decay, or the circumstances combined which are necessary to produce it.

What I conceive to be the most prolific source of malaria is, animal matter in minute fragments, mingled with vegetable matter in a process of *slow* decay. Where wash-water is being constantly thrown out, around houses, in by and shady places, amongst rubbish, where old bones and vegetable matter are left to rot by slow degrees, it cannot fail, after a long time, to give rise to, or produce a pestilential effluvia, especially in very dry seasons; for it is generally the case that wash-water contains more or less animal matter, and that, too, of a kind favorable for the generation of miasmatic exhalations.

It will be found generally the case, that the sickly season does not commence until the thermometer falls a little from its extreme point, and the sky assumes that peculiar veiled appearance that it has in the latter part of the summer, and the autumnal months, or in very dry times. The fore part of the season is the healthiest part of the year, for the heavy rains and storms of the spring have swept all noxious matter from the air, and left it rightly and equally tempered. It generally happens, that as the drought increases the dews lessen, until the healthful moisture of the air is gone. Now, at this time, the intensity of the sun's rays is on the wane, for this occurs in the latter part of summer and fall, and the hottest days of the year are in the last of June and the fore part of July, and the most sickly time is in September, and sometimes in October.

When the dews begin to lessen a little, the sky assumes a dark or red appearance, and the sun's rays are a little blunted, as though its rays were in some way obstructed; until now, the evaporation from the earth's surface is not very poisonous, but now the evaporation from all the highlands, and drier part of the country, is very trifling, and daily lessen; and now the drought increases. At this time the water is mostly gone from the earth's surface; the ground parched by drought; the atmosphere already deprived of all healthy sources, whereby it might be supplied with moisture, at the very time when there is the greatest necessity for it; and this lack of humidity in the air must be supplied from some source, and this vacancy is soon filled up by an increased and rapid evaporation, from the half-dried swamps, stagnant pools, sinks, gutters, sewers, and from the banks and bottoms of streams, where the water has fallen and left the mud exposed; from these sources the moisture of the air is still maintained, and the atmosphere is still humid.

But now the equilibrium of the air is partially destroyed, it being over-dry in some places, and excessively humid in others; for this humidity is not like that humidity which comes from clouds and storms of rain, which in itself is harmless, but it is a humidity formed of noxious vapors, constantly springing from decomposing matter; which, being either chemically united or mechanically mixed with some elementary principle evolved from decomposing matter, is thereby rendered much heavier than humidity from other sources, and becomes incapable of rising very high in the air, unless it is forced up by some fixed current of wind; and thus it happens that, under these circumstances, the atmosphere becomes unequally tempered. And now the moisture of the earth is so far exhausted on all the uplands, that it cannot afford much material for evaporation, and this process is of necessity limited

to a small surface, that is, from swamps, marshes, ponds, streams, etc., from which places evaporation is very much increased, and the vapors rise in denser volumes, bringing up the poisonous exhalations from these places, where vegetation, flies and reptiles, have fallen and rotted for ages; where the matter, after being long steeped, is every year dried down, in the latter part of which process there is formed, and evolved from this mass, by the action or re-action of decomposing elements on themselves, a something which we call *malaria*, long known by its effect, being followed by a certain train of diseases peculiar to themselves, and known to be produced by no other morbific agent.

Now, under these circumstances, should the wind be low, which is generally the case, sometimes a dead calm prevails, or the wind sets lightly from an eastern direction, blowing with a current just strong enough to move the poisonous vapor from its resting place, and spread it over the country; and should this state of things exist long, and progress to an intense degree, a sickly time must inevitably follow; and when this state of things does progress to an intense degree, it is generally brought to bear most severely on the community in the autumnal months, increasing as the cold season approaches, or until some violent storm or frost occurs; when the reverse of this happens, the sickness of the season is very much modified, assuming less of an epidemic character.

I am convinced, from experiments and observations, that wood is capable of generating an immense amount of this poison; decomposition of the ligneous fibre is slow, and where it is long exposed to wet and dry, as in marshes, pools, and about houses, for many years, I believe it will produce a pestilential effluvia. If pools of water, standing in the blue clay on these prairies, have nothing of the wood kind in them, the weather being very dry and hot, so the water does not move in or out of these pools, in two or three months the water becomes perfectly sweet and clear, and if it is not agitated from the bottom, it may be drunk or used with impunity; but if these pools contain logs, chips, brush, leaves, or wood of any kind, that is, old and in a decaying state, then the water never becomes either sweet or clear, but assumes a dark color, and the drier the weather, the blacker it gets, when it becomes an active and certain poison, producing on the human constitution sudden and alarming effects, accompanied with excessive vomiting and purging, extreme prostration, and death. And how much sickness there is produced by drinking water impregnated with this poison, is difficult to say, as water holds it in solution in every degree, from the minutest quantity, which would require years to affect the constitution, up to a degree of concentration sufficient to destroy life in a few hours.

The Indians suffer less from these causes than the whites, and the reason is obvious: they seldom live long in a place, constantly moving from one place to another, and often burn their tents, and erect new ones, and a fire is kept constantly burning in the centre of the tent, around which they sleep; they do not live long enough in a place for the accumulation of filth to become an effectual source of disease.

Although these countries, as a general thing, are not subject to extreme atmospheric vicissitudes, yet it sometimes happens that we have inflammatory diseases in the cold half of the year, as inflammation of the lungs, pleura, and the like; and although they occur at a season of

the year when the air is free from all noxious exhalations, yet they generally assume that grade and type which is common to malarial fevers, and they generally fall most intensely on those living nearest the focus of miasmal emanations; hence I count them as malarial; and taking this view of the subject, I have long since concluded to bleed less and give quinine more, and with this treatment I have been much more fortunate than when I used the lancet.

But antimony is our main reliance in these cases. Tart. antimony, judiciously administered, will seldom disappoint the physician's expectations. As soon as the pulse falls, and the expectoration becomes a little modified, I add quinine to the antimonial powders; and when the antimony is no longer indicated, I continue the quinine, combined with ipecac., and sometimes Dover's powder. (My Dover's powder is made with the nitrate of potassa in place of the sulphate.)

I have only one thing more to add at this time, and that is, with respect to the use of quinine, combined as described in my former paper.* Make a powder of quinine, camphor and pulvis Doveri, then the powder will contain quinine, nitre, opium, ipecac., and camphor; now, if you increase the ipecacuanha a little, you will have a better powder for winter fevers, for ipecac. increases the effect of quinine very much, especially in fevers that verge towards the continued type. I look upon opium and camphor as important additions to quinine, unless contra-indicated, and we seldom meet with a case where nitre is not admissible. In treating fevers, there are many indications to be fulfilled, some of which quinine alone would not effectually meet. Quinine sometimes operates too locally, and the addition of camphor gives it a more general searching effect; and if the effect should not be increased, I believe it is more effectual by being more particularly directed to certain indications to be fulfilled, which is just what we should be led to expect from *a priori* reasoning; and in addition to all this, it sometimes becomes necessary to add a more potent and diffusible stimulant, as brandy.

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* New York Journal of Medicine, vol. 8, p. 69.

PART SECOND.

Critical Analysis.

Art. XI.—*A Practical Treatise on Venereal Diseases:* or, Critical and Experimental Researches on Inoculation, applied to the Study of these Affections; with a Therapeutical Summary, and Special Formulary. By Ph. Ricord, M. D., Surgeon of the Venereal Hospital of Paris, Clinical Professor of Special Pathology, etc., etc. A new Translation from the French.

The growing interest which is evinced by the profession, in the thorough and philosophic investigation of the various maladies originating in Syphilitic infection, will obviate the necessity for apology, in bringing again before them the principles embodied in the work of M. Ricord, which has for some years past been regarded as standard authority in this department of medical research.

Although the *many* may have "learned, marked, and inwardly digested" the facts and theories pertaining to this subject, the supposition, that they may as yet have escaped the observation of the *few*, renders it highly probable that a condensation and brief review of the interesting questions raised, and the remedial measures proposed by Ricord in his valuable treatise, will not be uninteresting to that few at least. For it must be admitted that, until his time, great difference of opinion prevailed, not only in respect to the pathology and history of venereal diseases, but also in their treatment; and to his experiments and observations mainly belongs the credit of establishing upon a sure and philosophical basis their etiology and distinctions. The use and importance of Inoculation as a diagnostic and prognostic test, was the first great step taken towards the correct understanding of these affections; and this step was first taken by Ricord; and, had he stopped here, he would still have conferred upon this department of medicine incalculable benefit.

Leaving out of the question the non-virulent or blennorrhagic affections, we purpose to restrict our observations entirely to true or virulent inoculable syphilis, and the consecutive diseases arising out of it.

Our author introduces his subject by proofs of the existence of a specific virus, which he denominates the venereal virus; identical in

its character and capable of re-producing itself by inoculation; and this is the sole producing cause of primary symptoms. He says:

'Now the incontestible existence of the venereal virus is proved, by a peculiar property, of a distinct morbid secretion, and therefore the pus furnished by certain syphilitic affections has the constant and regular property of re-producing a pus similar to itself, in consequence of an alteration identical with that which first secreted it.' P. 31.

M. Ricord has performed an immense number of inoculations, with the various secretions, poured out by ulcerations of every kind, and his experiments have brought him to the conclusion that the virus secreted by the chancre alone, during the period of ulceration or increase, is capable of producing chancre. Thus on page 45:

'All the normal or morbid secretions of persons reputedly syphilitic, have been examined by means of inoculation, and only one form has given uniform and constant results; and this form is the primary ulcer, or chancre.'

'This chancre is to constitutional syphilis what the bite of a mad dog is to hydrophobia, and does not produce a specific pus except at a certain period of its existence.'

'The primary syphilitic ulcer cannot be the same in all its stages; and it cannot cicatrize without first becoming a simple ulcer, by the destruction of the cause which served to maintain it. Similar results cannot be required from these different phases; it is the period of development, or statu quo, of the ulceration, while there is no effort at cicatrization, that the chancre secretes the venereal virus.'

'Thus a chancre on the end of the finger, on the foot, thigh, or tip of the tongue, will (if it has not been modified,) produce pus, capable of producing a similar chancre, by inoculation, without the participation of the sexual organs; whilst no other affection of these organs, whatever its form or extent, or the degree of inflammation which may accompany it, can re-produce a chancre.'

Inoculation is performed by a small portion of the virus taken upon the point of a lancet and inserted under the epidermis. On the second day a small papule is seen, surrounded by a red areola; from the the third to the fourth day this becomes vesicular, with a depression at its centre; on the fifth day a pustule is defined, resembling very closely the pustule of smallpox; and now the areola fades and an effusion of plastic lymph produces the characteristic induration surrounding the sore. From this time the pus becomes more thick, and crusts begin to form; if these are detached we find an excavated ulcer seated on a hard base, and covered by a grey pseudo-membrane, which is difficult to be removed. The following are the results produced by inoculation of morbid discharges and the indications derived therefrom.

Between the years 1831–1837, M. Ricord inoculated 1151 cases of chancres, virulent buboes, and primary pustules, occurring in both sexes, all of which produced the pustule, which is the direct antecedent of chancre. During the same period, inoculation was performed from 518 cases, comprising chancre in the period of reparation, mucous tubercles, secondary and tertiary symptoms, with results wholly negative;—the pus produced nothing.

985 cases of venereal affections, not depending on the syphilitic virus, including sympathetic and primitive buboes, blennorrhœa, balanitis, ulceration of testicles, and vegetations having various forms and seats, were inoculated, with negative results.

Some 75 cases of chronic ulcers, herpes, scrofula, ostitis, etc., produced no results upon inoculation. From these, and analogous experiments, the following deductions are drawn: That primary syphilis alone is inoculable; that the venereal virus is only secreted during a certain period of the ulceration. That blennorrhœa, in all its forms, is non-inoculable, and cannot produce chancre; and, therefore, by this test, the non-identity of the two diseases is established; and that secondary and tertiary syphilis will not produce primary symptoms. It will therefore be perceived, that inoculation serves to distinguish from each other the reputed primary symptoms of syphilis, and that it draws the line of demarcation between primary and secondary symptoms, besides affording us the only positive method of diagnosis; for the mere appearance, seat, and history of the ulceration, is oftentimes fallacious, many of the simple affections closely resembling those which are virulent; it assists us materially in the treatment, and in the selection of medicinal agents, proper to be employed. Nor are its advantages less conspicuous in the prognosis, for it teaches us that every person, who has had inoculable symptoms, remains positively susceptible to general infection, and liable afterwards to symptoms of constitutional syphilis.

It is to be regretted that our author has been so meagre in the practical portion of his work. After the splendid chapters on the philosophy of venereal diseases, it was to have been expected that he would have given to the world, in a more extended manner, the result of his experience in their treatment. In this we have been disappointed, not that fault can be found with what he has imparted, but regret that he had not imparted more.

He urges strenuously the importance of destroying chancres, as soon as possible after their inception, by the abortive method; viz., cauterization with the nitrate of silver, or excision.

'Whatever form a chancre may assume at its commencement, it ought to be treated by the abortive method; for there is no authenticated instance of ulcers, destroyed within the first five days after infection, having afterwards given rise to secondary symptoms, if these ulcers existed alone, and without other actual complications.' P. 220.—Again:

'Therefore, whenever after a suspicious connexion, a pustule is formed upon the organs exposed to the contagion, *whatever its nature may be, and without an exact diagnosis being requisite*, it must be ruptured, and its base well cauterized; for no bad effects would be felt, even were a mistake made, and pustules of eczema or herpes cauterized. The caustic to be preferred in this case, is a pointed piece of nitrate of silver, by which all the parts exposed can be reached.' P. 221.

It will be observed that our author, regarding chancre as strictly a local affection, relies entirely upon the destruction of the ulcer by cauterization, and the subsequent cure of the sore without resorting to constitutional medication. According to his theory, no chancre, if radically destroyed before the fifth day of its existence, is capable of producing constitutional infection. We are satisfied that there are many exceptions to this rule, and that exclusive reliance upon it has favored the development of secondary syphilis, where a cautious, general medication, might have obviated this result.

In certain constitutions, absorption takes place with great rapidity; and experience has proved, in many instances the lymphatics have imbibed the virus very soon after the formation of the chancre. It is no

uncommon thing to find that a true venereal bubo has formed, and gone on to suppuration, in the course of a few days; much within the limits prescribed by Ricord. And furthermore, it is not always possible, by the caustic, to radically change the character of the sore. Some point may have been left untouched, or, acting only upon the superfices of the ulcer, the more profound portion still continued to secrete the virus. There is strong reason to believe, that the whole indurated tissue is charged with this morbid secretion; if this be true, the cauterization merely locks it up, while absorption goes on from within. Doubtless, in very many cases, the destruction of the chancre by caustic is an effectual abortive; but the exceptions are not a few. Where the patient will submit, if we are to rely solely upon this plan, excision would seem to be the safest and surest method. Inasmuch, therefore, as we are unable to ascertain frequently whether absorption has taken place or not, it would seem to be a dictate of prudence, that we should keep in view the probability of this event, and act accordingly. If, then, constitutional infection should take place, we have our patient prepared for active treatment; and should it not occur, no harm can accrue from general specific medication, properly administered.

Our author's management of chancres differs but little from the modes ordinarily employed. Repeated applications of caustic, with dressing of lint, moistened with aromatic wine, black wash, etc., until the period of ulceration has passed, and the stage of reparation supervenes, when the treatment becomes the same as for a simple ulcer. One or two points deserve attention; concerning these, Ricord can speak for himself.

Of the period of reparation, he observes:

'When the period of reparation arrives, as long as it goes on regularly, the dressings with aromatic wine may be continued, and the cauterizations resumed only when it becomes necessary to repress the exuberent granulations. Frequently only the epidermis is wanting to complete the cure; the surface of the ulcer becomes level with the surrounding parts, remains red, and yields hardly any secretion, but yet does not heal; then the superficial application of the nitrate of silver, so as just to whiten the surface, without cauterizing, suffices to terminate it.' P. 225.

Concealed chancres, or, as they are termed, chancres larvés, have received elucidation from Ricord; and the aid they afford us, in pronouncing upon otherwise anomalous forms of the disease, is highly important and valuable. It not unfrequently happens that secondary symptoms declare themselves, without the patient or his physician having been conscious of the existence of chancre. There was a discharge from the urethra, with ardor urinæ, etc., supposed to be gonorrhœa; or gonorrhœa may really have been present as a complication. Now, in these cases, the consecutive effects owed their origin to a chancre at some point of the urethra out of sight, and therefore unsuspected.

It is important to bear in mind this complication, and to be able to detect its presence. This sometimes is not easy, especially if it coexist with gonorrhœa. If the chancre is seated at the meatus, ocular inspection decides the matter at once. The following considerations will assist the diagnosis, under other circumstances.

The chancre in the urethra usually gives rise to a secretion from the canal, from the sixth to the twelfth day after connexion; it has a

sanious appearance, and inoculation produces the pustule; pain is felt at a particular portion of the canal. When induration exists, it is likewise confined to a point, is well defined, and cartilaginous. In gonorrhœa, redness is observed at the meatus; the discharge follows soon after contagion; it is muco-purulent, and when blood is found in it, it is rather bloody than streaked, as in chancre. There is pain along the canal, chordee, and the induration, when it occurs, is general, or invades chiefly the deeper portions, and is deficient in the cartilaginous feel so peculiar to chancre.

His treatment is thus detailed:

'When the urethra is the seat of the chancre, and it is complicated with symptoms of acute blennorrhœa, recourse must first be had to antiphlogistic treatment; leeches to the perinæum and penis, emollient opiated fomentations, baths, and copious draughts of mild fluids. I give, every evening, opium and camphor pills, to prevent the erections, which distend the diseased surfaces and cause them to crack, thereby augmenting the ulceration. Often, when the blennorrhœal symptoms are not too intense, the cauterization with nitrate of silver, by means of Lallemand's caustic holder, may be used from the commencement; it acts in this case in the same manner as upon external chancres.'

'If the ulcer be perceptible, and seated at the entrance of the canal, the treatment for other chancres is quite applicable to it; only, when it can be borne, it is advisable to keep a small piece of lint between the lips of the meatus to prevent their touching. The blennorrhœa, which under those circumstances accompanies the chancre, disappears with it, where it alone is the cause, or yields only, when it is a concomitant affection, to remedies for blennorrhœa, which must be employed at the same time.'

Of the use of mercury in sloughing chancres he says:

'I can confidently assert, that, except in a very few cases, the so common employment of mercurial preparations, either as dressings or internally, are most hurtful in phagedenic chancres, and the more so, as not being accompanied by induration; there is more inflammation, and nervous irritability. It is by no means uncommon to see these chancres, when approaching the period of reparation, relapse under the influence of mercury, to their former state; and chancres which were at first limited and regular, become phagedenic from the employment of mercury.'

The importance of the indurated chancre, and the modifications of treatment it demands, require particular notice. For it is from this chancre that constitutional infection almost invariably arises. And here it is that mercury is indispensable; for the induration is the announcement that secondary symptoms are about to occur; and if mercury be in any manner a specific against the venereal element, here its use is indicated. In the other, and simpler forms of chancre, our author contents himself, for the most part, with local treatment; for they are much less frequently followed by constitutional disease. But even in these forms, if, after cicatrization, induration remain, or attend the sore during its period of ulceration, he resorts to mercury, with a view to its antidoting properties against the poison of syphilis. In the true indurated chancre, therefore, attended as it is from its very inception by this characteristic induration, upon this drug he places his principal reliance. For, as he truly remarks, in speaking of the difficulty of eradicating the malady by local applications:

'If a well-directed local treatment often produces a complete cure, it requires a long time, and is then imperfect. The difficulty of radically curing an indurated chancre by ordinary means, and the good effects of mercurials

in its treatment, have been the principal arguments which have caused it to be considered as the sole type of primary syphilis, and mercury as the only specific to be opposed to it.'

Particular idiosyncrasy of constitution, will demand judgment in the form of mercurial to be employed. As a general rule, the protoioduret, in one grain doses, in combination with cicuta, is as eligible a preparation as any. It should be given slowly, so as not to induce ptyalism before it has had time to exercise its effects upon the induration.

The chapter on buboes contains nothing of especial interest. He advises their discussion, if possible, and cautions us against confounding the bubo of absorption from scrofulous engorgements. Blistering the tumors, and dressing the denuded surface with a solution of corrosive sublimate, grs. xx. to ℥ j. of water, until an eschar is formed, when emollient cataplasms are to be applied, is a favorite mode of dispersing buboes which have resisted gentler treatment. Of its beneficial effects we can speak from experience. Analogous to this, is the camphor moxa over the induration. These methods are attended with the disadvantage of producing considerable pain, and indelible scars, which limit their application in many instances. These objections do not obtain in simple blistering, frequently repeated, than which we know of no remedy of greater efficacy. Rest, compression, mercurial urinations, and local depletion, comprise the sum of the treatment. With reference to specific treatment, he thinks that the mere existence of a bubo is no stronger indication for its use than the existence of a chancre, except in certain conditions, and then frictions are to be preferred.

With this view we are inclined to differ. If absorption has taken place as far as the groin, we see no reason why it should not contaminate the fluids, unless arrested by specific medication. We can scarcely say to the venereal virus, when it has reached this point, 'thus far shalt thou go, and no farther,' and attempt to arrest its course by local applications. Consideration for the future safety of the patient, would suggest the use of such means as would be most likely to counteract and suspend the further advance of the disease.

Following the usual course and classification, Ricord divides secondary symptoms into those affecting the skin and mucous membranes. He opposes the idea, that these affections can arise, de novo, after a lapse of many years from the cure of the primary symptoms, although he has observed them, in one case, as early as eight days after the occurrence of chancre. He commences his treatment as soon as possible after they show themselves. If the syphilis exist with complications, he attempts the reduction of the disease to its simplest form. If these complications do not contra-indicate specific treatment, it is used simultaneously with that proper to eradicate the existing affections foreign to the disease. Thus, simple cutaneous eruptions, scrofula, and organic diseases, should be removed or modified, because they act as irritants, and are calculated to prolong the specific affection.

Antiphlogistic measures, diet, baths, sudorifics, tonics, etc., enter into the catalogue of remedies proper to be employed to effect this purpose, and to prepare the system for the reception of mercury. The cutaneous eruptions, venereal in their organ, he terms syphiloids.

These resemble in type idiopathic affections of the skin, and may be papular, pustular, squamous, or tubercular in their character. Some writers contend for the existence of vesicular syphilis. This he denies; or at least pronounces it an exceedingly rare affection. Doubtless, eczema or scabies may co-exist, but they have no direct relation, as effect to cause, to the syphilitic element. One form of eruption is somewhat new in this country, and therefore deserves notice. It is the mucous tubercle, or "tubercule muqueux" of the French. This form of secondary infection may occur the earliest after the primary symptoms, and by many is supposed to belong to this stage; but the fact, that it is non-inoculable, induces Ricord to place it among the secondary affections. For it will be remembered, that primary symptoms alone can re-produce themselves by inoculation. The secondary is only transmissible by hereditary descent, and the tertiary forms are neither inoculable nor transmissible. As the treatment of this tubercle is peculiar, we subjoin his remarks.

"Whatever its seat may be, whether in the anus, vulva, groin, or between the toes, umbilicus, or axilla, at the same time as the general treatment which it requires as a secondary symptom is employed, the local medication, which from the rapidity of its result is truly specific, is as follows:"

"The diseased parts are first to be washed, if they are not indurated, with pure chloride of sodium, which, in the contrary cases, or where there is too much irritation, should be diluted with water, so as to excite slight tingling without pain. Then after washings, which are to be repeated twice a day, the diseased parts are to be sprinkled with calomel. Eight or ten days of this treatment will cause enormous masses of these eruptions to disappear, which, situated between the toes, have for many months prevented the patient from walking."

The observations of Ricord, on the use of mercury in confirmed syphilis, are valuable and judicious. While he acknowledges that it is not always absolutely specific, yet he contends that it is the most certain and powerful remedy we possess, and will, notwithstanding the objections which have been raised against it, maintain its rank as a therapeutical agent of the highest importance.

No doubt the advocates of the anti-mercurial school have based their arguments for its disuse upon the deleterious effects which its abuse has occasioned. For mercury, injudiciously employed, is capable of producing results little less disastrous than syphilis itself. Every drug of equal potency may be equally misused, and produce equally bad results. Too great care cannot be exercised in the selection of the proper cases, the right time, and manner of its exhibition. Many circumstances forbid its employment. The presence of scrofula, if it exist in any activity, anemiated states of system, and the cachexia induced by the disease itself, render the incautious use of mercury a hazardous proceeding.

Every practitioner is aware that he is frequently compelled to suspend its employment, until he has brought the system up to that point when advantage can be gained from its use. No time is lost by such a course, for the more force and stamina the constitution possesses, the sooner will he be able to drive out the venereal element; whereas, if this precaution is neglected, our remedies only aggravate the disease, while they render the system less able to re-act against it. Another serious error in the administration of mercury is, that it is

given too fast. Ptyalism or diarrhœa is induced, which compels us to omit it, long before it has had time to operate upon the disease. It is much better to occupy several weeks, or even months, in producing this result, than to give the patient an ulcerated mouth, which only increases his susceptibility to its effects hereafter. The favorite preparation with our author is the protiodide, given in small doses, to be diminished or exhibited at longer intervals if its effects begin to manifest themselves too rapidly. As adjuvant, he recommends the sudorific ptisans of sarsaparilla, rumex, or mezereon, aided by the use of local or general baths. Salivation is always to be avoided, if possible; and we quote with great pleasure his remarks upon this subject:

"If it be settled that salivation is useless in the cure, the progress of which it retards, and that it always constitutes a disease, if not most frequently serious, at least always tedious and painful, the greatest care must be taken to avoid it, by discontinuing the use of the agent which produced it as soon as the mouth becomes affected."

If these cautions are needed in Paris, where the disease exists with less of the complications contra-indicating its use, how much more applicable are they in our country, where scrofula and kindred maladies constitute so important an element in all forms of diseased action, insidiously undermining the citadel of life, by a slow and stealthy poison, which plants the elements of prostration and decay upon every step of morbid processes!

The chapter on tertiary affections is particularly brief and unsatisfactory. The importance of this class of symptoms, their obscurity, and difficulty of diagnosis, demanded a more extended notice from one whose opportunities and experience so well fitted him for the task. He alludes to the fact, that the secondary insensibly merge into the tertiary symptoms, without our being able, in many cases, to draw the line of demarcation between them.

After a greater length of time, this obscurity vanishes, and we have that group of affections denominated tertiary. The date of their origin and the progress of their development is often doubtful; but as they arise generally at long intervals after the primary disease, they lose, for the most part, their specific character, being non-contagious, and if transmissible at all, only transmit to the offspring habits and predispositions to disease, engendered by the broken and prostrated constitutions of the parents. Tertiary symptoms assimilate themselves very closely to other diseases, seated in the same tissues, and having to the venereal virus no relation as a cause. Therefore it is that the treatment loses its specific character, and must be based upon general principles and indications. Mercury now no longer finds a place, but must give way to remedies of a more tonic and antiscorbutic nature. Upon this subject Ricord speaks thus:

"The mercurial treatment presents something remarkable to those who will attentively observe its action; thus we find it of little efficacy, and indeed often positively hurtful, in the primary affection, during the period of progression, or increasing ulceration; it then becomes powerful as soon as induration manifests itself in the chancre, and shows its greatest efficacy when the characteristic general infection is in the period of incontestable secondary affection, again losing its curative properties in the tertiary affections, the more so the further they are removed in their form from the preceding."

In this classification he includes deep-seated tubercles of the skin and mucous membranes, osteocopic pains, periostitis, syphilitic ostitis, gummata nodus, or deep tubercles of the cellular tissue, and some others of minor importance.

The treatment for the tubercular forms consists in the local application of emollients and narcotics; and if inflammation be present, leeches, applied at some distance from the tumors. If the tubercles are indolent, stimulating dressings, or cauterizations with the acid nitrate of mercury. The principal object of the physician, however, should be to sustain and recruit the constitution by all possible means.

"It must be remembered, that we have to deal with a long and serious disease, which no medication can cut short in its development. As these symptoms generally appear in patients who have resisted the effects of mercury, it has therefore no power over it; and if its use be imprudently pushed far enough to produce the symptoms which may attend its administration, the severity of the disease will be increased."

The nocturnal pains in the limbs, periostitis, and ostitis, require a similar treatment.

Blisters to the painful parts are of great service; they may be dressed with opiated cerate, or, what we think better, sprinkled with morphine. Leeching is occasionally indicated, especially when the cellular tissue participates in the inflammation. In some cases, when the tension of the fibrous tissues is very great, relief can only be obtained by a deep incision, by which the strangulation is relieved. We have found in the more chronic cases, the application of emplast. hydrarg., or plasters of conium with iodide of lead, very satisfactory remedies.

But the grand heroic agent, in all these affections, is the iodide of potassium,—and we confess that we feel great surprise that our author has passed it by with such brief comment. Experience has shown that, in its specific control over tertiary syphilis, it is unsurpassed; and it holds the same position with regard to these affections as mercury does to the secondary forms. Many persons, whose nights for months had been sleepless from pain, have been tranquillized and relieved by a few full doses of this remedy. Nor are its results less valuable in those cases where pain is not a prominent symptom. It imparts tone to the system, improves the appetite, and at the same time counteracts those symptoms which scrofula has engrafted upon the original disease.

In this stage of the disease, also, opium becomes a very valuable agent, allaying, as it does, that undue irritability of the nervous system, and quieting attacks of pain. Mineral and vegetable tonics Ricord speaks of highly, especially the iodide of iron.

In conclusion, we would say, that no work upon venereal diseases with which we are acquainted, is so satisfactory in its descriptions of disease, or more entitled to credit and reliance in its rules of treatment. To the student, who wishes an intimate acquaintance with the philosophy of syphilis, it is invaluable, and not less useful to the physician as a guide in practice. H. M. G.

ART. XII.—*The General Nature and Treatment of Tumors.* By GEORGE MACILWAIN, M. D., London.

THIS is the title to a volume of 219 pages, devoted to a consideration of the Causes and Nature of Tumors, with a view to their removal by general treatment, without resorting to surgical operations. It is a work written in a true spirit of philosophical inquiry, and is replete with valuable and interesting suggestions. It is the more important, as it treats of a much-neglected and obscure subject. Our knowledge of the causes of tumors has always been very limited and indefinite, and our modes of treating them, to a very great extent, empirical; consisting either in extirpation with the knife, or the application of some supposed specific, as iodine, mercury, etc. And hence there is no part of the whole domain of surgery which stands in more need of a thorough investigation, aided by the microscope, chemical analysis, and a rigid appliance of *dietetic* regulations, than this. The author whose work lies before us, contends that all tumors or morbid deposits, whether benign or malignant, have their origin, primarily, in some one or more organs engaged in the process of assimilation or excretion. "No atom of our bodies can be built up," says he, "but by a series of processes, which may be expressed in one word, assimilation. The stomach, and other portions of the alimentary canal, the organs more immediately subservient to its functions, as the teeth, salivary glands, liver, pancreas, spleen, etc., must all perform their respective duties; the absorbent vessels and glands, the respiratory and circulating organs theirs; and, lastly, when the fluidified material (blood) is distributed to the various parts, the powers of the part must convert such material into the characteristic structure, whatever that may be; then again, the useless parts of the food, and the old materials of the body must be removed; thus the absorbents and veins must return the blood or other fluid charged with useless matter; and this must, as well as the feculent matter of the food, be conducted to the various outlets of the body, represented chiefly by the lungs, skin, kidneys, and bowels. Lastly, the nervous system, whence these various organs derive their power to do *anything* must be in a certain state of tranquillity." Again; on page 30, he says, "Strictly speaking, we are ignorant of the causes of tumors; at the same time, by a careful observation of facts by which they are preceded, accompanied, and followed, we can educe very important general propositions. 1st. That they are connected with *certain* conditions of the system. 2d. That these are connected with conditions of disorder, and that, in many cases, we can arrive at correct general ideas of the *nature* of such disorder; because we find that, in such cases, the removal of such disorder is accompanied by the absorption of the tumor. . . . Supposing, then, that I have thousands of examples showing that the proper and ordinary function of the body is to secrete, or build up, parts of bone, muscle, tendon, skin, etc.; and to eject certain other forms of matter; and that I see a man with a huge lump on his face, knowing that it is not a natural appendage to him, and if, on examination, I find that, whether it is like the ordinary structures or not, it is in a situation where it cannot serve the purposes to which they are applied; then, however ignorant I may be, in the *strict* sense of the term, of the cause of that lump, I am at least

certain of this, that either the *food* contains something unusual, or that some of the assimilating organs are acting on it in some unusual manner, or both. This seems indisputable." But Macilwain not only makes tumors originate in defective action, or derangement of some one or more organs, but he also attributes to such depositions a true functional office. Thus, on page 33, he says, "Now, that tumors represent some function, is indisputable. Viewing them as only one class of unnatural depositions, let us examine those forms which link them most nearly to natural structures: such as hypertrophied organs; enlarged muscular structure of the heart and bladder; and again in the goitre and enlarged prostate. There we see unnatural depositions truly, but under circumstances that compel us to admit that it serves some function; because, if I analyze the matter, I find myself thus compelled, exactly on the same grounds that I suppose the respective organs to have any functions at all. I know not, for instance, what the natural uses of the thyroid gland or prostate are; and I am equally in the dark as to the use of the respective enlargements of them: but in regard to the heart and bladder, I am in a somewhat different position: I know, for example, that their functions are—the one to pump forth the blood, the other to eject the urine; and the very knowledge that it is in the muscle that this power resides, suggests an increase of power as the proximate requisition established in the organ. Reflection readily suggests that this increase in a projecting organ can only result from its having more fluid to project, or obstacles to overcome; and accordingly we find that these severally represent the conditions which give rise to the disease; that is to say, a narrowing of the canals through which they eject their respective fluids, or, as in the heart too often, more fluid is sent to it than there ought to be. . . If we now continue our observation, we shall cease to find, perhaps, unnatural depositions represented by simple enlargement of organs; but still we may find many obviously consisting of the same materials as are employed in the construction of the body, as bone, cartilage; *many* having, indisputably, all the materials of a living part, and therefore affording the same grounds for the inference of a particular function. Some, on the other hand, appear unorganized; but then they are contained in cysts which *are;* and, as this is a plan pursued sometimes by nature in regard to foreign bodies, so that although retained, they may be said to be exterior to the body, it may *possibly* happen that many of such tumors may execute an excretory office merely; still there are none of any kind which more perfectly (I speak of the common wen) exemplify their definite relations with the body: by their occasional absorption; by alteration of their contents; and, lastly, in the serious disturbance which has occasionally arisen from irritation of them." Another important point insisted on by our author is, that the seat of all diseases, (including tumors, of course,) is but seldom in the organ or tissue primarily at fault, but in the *compensating* organ or tissue. Thus an interruption or interference in the proper function of the skin will readily give rise to disease in the kidneys, liver, or bronchial membrane; but will seldom or never produce disease in the skin itself. But his views on this subject are best given in his own words. Thus, on page 74, he says, "What I mean is simply this: the cause of diabetes is not in the kidney; the cause of cutaneous diseases is not in the skin; the cause of tumors is not in the tumor; and so on." And again,

on page 80, "let any one try the same question with reference to the more common seats of *all* diseases, and the organs said to be primarily disordered; and he will find the result of the inquiry ending in this: that those *impressions* which are most frequently the *originators* of disease, are *addressed* to one or other of the *most* important organs of the body; but that the disease, (whether it be a tumor, or any other usually subjected to surgeons,) is generally placed in a structure or organ less important than that on which the primarily-disturbing influence had impinged. In order to test this principle fairly, the *relative* importance of organs must, of course, be the guide. No doubt instances do occur of diseases being seated in the organ on which the primarily-disturbing influence had impinged; but all these imply excessive forces, or severe, dangerous, or fatal diseases," etc. In regard to the seat of tumors, Dr. Macilwain lays down this general proposition, viz.: "That there is a manifest tendency in the economy to place all unnatural depositions near the surface of the body, and in a structure (cellular tissue) where they interfere least with important functions; an incalculable majority being placed on or immediately under the skin." These several positions are illustrated and sustained by a great variety of facts and physiological deductions, well calculated to produce conviction in the mind of the reader. And the practical inferences involved, are so important as to demand for them the most careful consideration.

For if it be true that unnatural depositions, constituting the various forms of tumors, have their origin in derangement of some one or more of the organs of assimilation or excretion, then the practical inference, so strongly insisted on by our author, that the only consistent and rational mode of treatment must be founded on a removal of the primary derangement, assumes the form of incontrovertible truth. Or, to use his own language, "the original *cause* of no tumor can possibly reside in itself; because the cause must necessarily have *preceded* the tumor. That, therefore, the removal of any tumor by operation (excision) is perfectly compatible with the persistence of the cause whence it may have arisen. That, consistently with the foregoing, we can never predict, in any one case, that the removal of tumors by incision may not be followed by a recurrence of the malady, or its replacement by some other form of disease—a position abundantly confirmed by experience." Before, however, presenting the author's views in regard to the proper treatment of tumors, we must make one or two quotations from his chapter on the operation of medicines. On page 85, he says, "If, from such articles, (*i. e.*, food and condiments,) we now proceed to consider the action of medicines generally, we shall observe, in regard to a vast number of them, little more than exaggerated exemplifications of the very facts we had observed in regard to food—but with the following remarkable difference: in food, we could demonstrate that part of it nourished the body, and that part of it was rejected. In the same manner, in regard to condiments, we had no doubt, though in much less degree than in food, that they were partly nutritious, and partly otherwise; having some properties tending to excite actions ending only in their expulsion from the economy. In medicine, however, we begin to lose the evidence of *nutritious* property, and observe that a very large number of medicinal substances seem to be followed by immediate activity in one or more organs, *apparently* to effect their

expulsion; and we are the more disposed to view it in this way, from the fact, that if we exalt the dose, we render these actions more and more violent; until we reach a point, at which they tend to the destruction of the body." And again; on the following page, he says, "In the *apparent* expulsion of various medicines, we observe a proneness in different organs to be affected by different substances. Many are refused ingress, as it were, and immediately rejected by the stomach; others are admitted, but, perhaps, not into the circulation, and rejected by the bowels; others excite increase of bile, which may end in the same results. Others, again, are received into the circulation, but soon ejected by the kidneys, (diuretics,) or skin, (diaphoretics,) etc. In short, it is impossible to resist the impression, that, in regard to an immense majority of medicines which are generally employed, or most usually relied on, they are presently followed by apparent endeavors at their expulsion. . . . It is not necessary, however, to assume, from the notorious facts to which I have adverted, that the matter expelled is bona fide that, *still less merely that*, which was represented by the medicine given; but that the effects occasioned have some relation to attempted expulsion of injurious matter, is rendered probable by the fact, that we generally increase the expulsive action consequent on food, by taking anything which the peculiar state of the system renders indigestible, (that is, innutritious,) or as certainly cause indisposition by its retention; being precisely what happens in regard to *a large class* of medicinal substances." Again, he says, "if the general action of medicine be that which the foregoing views would represent it to be, its beneficial effects would generally consist in the exciting the actions of different organs of the body; and in so doing it would very conceivably induce the ejection not only of the injurious influence represented by the medicine, but that resulting from the *loaded condition of the organ.*" The foregoing extracts are sufficient to give the reader a general idea of Dr. Macilwain's views concerning the origin and nature of tumors, and the *modus operandi* of medicines. And from them he will have already anticipated the general character of his treatment. This, instead of consisting in the administration or application of some supposed specific, or in excision without previous preparation, is directed entirely to the accomplishment of two objects, viz.: to correct the morbid condition of such organ or organs as seem to have given rise to the morbid deposit; and to avoid all such articles of diet, or other circumstances, as favor the generation in the circulating fluids of the system, of the materials of which the tumor is composed. And as, in fulfilling the first indication, the organ or organs at fault may be any of those connected with the processes of assimilation and excretion, so it is plain that no individual remedies can be pointed out as applicable in all cases; but the choice of medicinal agents must depend entirely on the organ or organs to be corrected. In accomplishing the second object, our author insists on sufficient exercise, pure air, the strict avoidance of *fat* or *grease*, *sugar*, *alcohol*, and all other articles that contain an excess of carbon in their composition. But on this head we want much more careful investigation into the chemical composition of different tumors or morbid depositions. Indeed, the great, and perhaps only, obstacle in the way of adopting in practice the principles advocated by Dr. Macilwain, is the minute and searching inquiry into the condition of the different organs and functions of the body, which is re-

quired in order to detect the cause of the tumor, and afford a foundation for the adoption of those medicinal and dietetic measures, which constitute a rational treatment. But this obstacle is plainly founded on either the ignorance or indolence of the practitioner, (not unfrequently both,) and therefore admits of an easy remedy. The extent to which we may control tumors, even of the most *malignant* character, by a rational treatment, will be best indicated by quoting the author's own language. On page 22, he says, "No physiological reason can be assigned why the same laws which lead to the unnatural deposition, might not be converted into the means of its removal; and that, though it may as yet be unsafe to assume that experience has exemplified the fact in regard to every species of tumor, it is equally unsafe to assert the contrary, in an absolute sense, in regard to any tumor whatever." And on page 217, he continues, "I will, therefore, only observe generally, that I know no form of deposition, to which the practice I would advocate has been fairly applied, which has not been influenced thereby; and many of the cases have been very striking. . . . And I see no end to the power we may gain over morbid depositions, if we will only take the trouble ordinarily bestowed on other scientific investigations." He relates several cases of well-marked carcinoma, situated in different localities, as the mammary gland, the scrotum, the lips, etc., entirely cured by constitutional and dietetic treatment; some of which we would gladly quote entire, did our limits permit. The reader, however, must not infer that Dr. Macilwain condemns all surgical operations for the removal of tumors. On the contrary, his position is, that as these diseases, whether benign or malignant, are dependent on or caused by more or less derangement of some of the functions of the body, such derangements must be ferreted out and removed before the removal of the tumor can be relied on as affording permanent relief. And further, that in many cases, even of carcinomatous and other malignant tumors, a long-continued perseverance in the same general treatment will cause the tumor to disappear entirely without any operation. Hence he says, "The fact is, that *tumors* are mere *symptoms* of deranged organs; they lie intermediately between affections of the surface of the body and the viscera; and if a tumor be removed, or an ulcer, without attending to the cause of its production, it must be followed, sooner or later, by some internal disease, or another tumor." Therefore he very justly insists that, in cases where extirpation is deemed advisable, the *cause* of the tumor should be first removed, by correcting all disordered functions; and the same course continued after extirpation, to prevent a return of the tumor or the attack of some other disease. And whatever we may think of the author's views of the curability of cancer and other malignant tumors, we fully agree with him in regard to the importance of due preparation of patients laboring under such diseases, before attempting extirpation; and we also cordially sanction the following sentiment, viz.: "With regard to all diseases not yet brought within our power, I would beg to observe, that no malady can be cured by those who are determined to regard it as incurable. Men will never *effectually* strive to do things which they despair of being able to accomplish." We would gladly extend this review in such a manner as to enter fully into the subject before us, but neither time nor space will at present permit; we would strongly commend a perusal of Dr. Macilwain's treatise to all our readers. Before

closing this article, however, we will glance at one other subject noticed in the work before us, viz.: the agency of respiration in the production of animal heat. It is here contended, in direct opposition to the views of Dr. S. L. Metcalfe, as expressed in the November number of this Journal, "that the lungs are *refrigerating* organs; and that it is by means of them, in combination with the skin, that animals maintain their characteristic temperature, by *throwing off* superfluous *caloric*." And this position is sustained by a variety of facts and sound reasoning, as we shall more fully show in a future article. A similar view was maintained by us in our Inaugural Essay, more than ten years since. But as it is our purpose to recur to this subject again in a future article, we shall leave it for the present.

N. S. D.

ART. XIII.—*The Trial of Caroline Lohman, alias Restell.* (Reported in full for the National Police Gazette.) 8vo. pp. 31. New-York, 1847.

THE notorious Madame Restell was indicted and tried in this city, in the month of October last, before the Court of General Sessions, "for manslaughter in the second degree, for committing an abortion on the person of Maria Bodine, and killing her *quick* child, under the law of 1846.* There were five counts in the indictment, four of which were punishable with confinement in the State Prison, not less than four years, nor more than seven. One count charged the procurement of abortion of a child *not quick*, which is punishable as a misdemeanor only, by our laws.

Before proceeding to our account of the trial, we may be allowed to express our regret that the absurd distinction between women *quick* and *not quick* with child, should still deform the statute book of our State; a distinction resting on no valid foundation, and recently banished from British legislation. This error, so dangerous to morality and the best interests of society, is of ancient origin, and arose from a belief, in the infancy of science, that the sentient and vital principle was not infused into the fœtus until some time after conception. Hippocrates made this period for the male fœtus 30 days after conception, for the female 42, while in some parts of his writings he asserts that this does not occur till the perfect organization of the fœtus. This error was still further confirmed by the doctrines of the Stoics, that the soul was not united to the body before the act of respiration, thus making the fœtus

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* The following is the law of this State, as it now stands, relative to abortion.

"Every person who shall administer to any woman pregnant with a *quick child*, or prescribe for any such woman, or advise or induce any such woman to take any medicine, drug or substance whatever, or shall use or employ any instrument or other means with intent thereby to destroy such child, unless the same shall have been necessary to preserve the life of such mother, shall, in case the death of such child or of such mother be thereby produced, be deemed guilty of manslaughter in the second degree."

How is it to be proved that the child was "quick," and how that the intent was to destroy the child? Is it lawful to induce premature labor at the seventh month, providing mother and child both survive? The law needs revision.—*Ed.*

inanimate during the whole period of utero-gestation. This doctrine, which prevailed until the age of Antoninus and Severus, gave place to the more popular sentiments of the sect of the *Academy*, who held, with Hippocrates, that the fœtus became animated at a certain early period of gestation. The same distinction was also made by the *Canon Law* of the Church of Rome, between the animate and inanimate fœtus, punishing the destruction of the former with the same severity as homicide.

Galen held that the fœtus became endowed with life about 40 days after conception, when he supposed it became organized; whilst others affixed different periods, and others, still making a further distinction between the imperfect embryo and the perfectly-formed fœtus, of course regarding abortion of the latter only as criminal. All these opinions, resting solely on hypothesis, unsustained either by argument or experiment, have had a direct tendency to countenance and encourage abortion during the early months of pregnancy.

This error is still supported by popular belief, and sustained by the laws of many civilized countries, including many of the States in our Union; virtually denying to the fœtus any vitality until after the time of *quickening*. The *English Law* formerly considered life as "not commencing before the infant is able to stir in its mother's womb," (*Blackstone,*) and it is only ten years since abortion *after quickening* was punished in Great Britain with death; while the same crime, *anterior to quickening*, was only viewed as felony; a distinction now no longer recognised in British law. We are sure that no process of reasoning, nor array of facts, is necessary to show that the fœtus is *alive*, prior to what is regarded as the period of quickening, and not *dead;* and that its destruction, in the one case, is as much an act of violence to physiological life as in the other; and consequently its criminality, in the eye of reason and morality, the same. The absence of consciousness on the part of the mother as to the motions of the child, is no proof that such motions do not exist; it may be owing to the fact that the liquor amnii is in greater proportion to the size of the fœtus in the earlier periods of pregnancy, than in the latter; and moreover, the child does not move in an active manner until after its muscular system has acquired a certain degree of development, and its motions, from this cause, are necessarily so weak that the woman does not often perceive them until in the course of the fourth month. But the fœtus is endowed with life from the earliest moment of conception, although the *manifestations* of life are more and more developed, up to the period of parturition. We trust every physician, therefore, who regards the welfare of his species, and the best interests of society, will do all in his power to dissipate this error, so fatal in its results, and so wide-spread in the community, that the *vitality* of the fœtus is imparted at quickening, and that procuring its abortion anterior to that time is not criminal.

But to return; the prosecution was conducted by the District Attorney, Mr. McKeon, and deputy, J. B. Philips, Esq., assisted by Ogden Hoffman, Esq., while the prisoner was defended by J. T. Brady and D. Graham, Esqrs.

After the summoning of the jury, which was completed with much difficulty, Mr. Philips opened the case as follows:

"The time which has been occupied in selecting you as the arbiters who are to decide upon the guilt or innocence of the accused, has not been mis-

spent, since it has secured to her a jury which may emphatically be said to be one of her own selection, who will patiently listen to the evidence in the cause, and who will pronounce their verdict with fearless and firm impartiality.

"To such a jury no caution is necessary; I have that confidence in your intelligence and integrity which assures me, that while you will accord to the prisoner all the rights which the law guaranties to her, those of The People will be maintained with equal fidelity; the supremacy of the laws will be vindicated; and if the evidence satisfies you (as I cannot doubt it will) of the guilt of this defendant, the community will no longer be cursed with one who, disgracing her sex, forgetting that she is herself a mother, disregarding at once divine and human laws, has amassed a fortune in the daily perpetration of a crime which violates and annuls one of the most sacred ordinances of Almighty God.

You will be told that you must discard from your minds all prejudices unfavorable to the prisoner, growing out of the peculiar position she has held in this community. Useless precaution to men like you! right-minded men, who will never permit their abhorrence of a crime to influence their decision as to the guilt or innocence of those who may be charged with its perpetration.

"The holiest spot in the Temple of Justice is the jury-box; sympathy, prejudice, or passion cannot enter it; ye are then withdrawn from the world and all its external influences, the stern, honest and inflexible ministers of Justice, whose decision the guilty alone await with terror and apprehension, but to whom innocence ever looks with confidence and never-dying hope.

"The duty which devolves upon me in conducting the prosecution of this cause is simply to narrate the facts, an investigation of which, by the Grand Inquest of the country, has resulted in placing Ann Lohman, otherwise known as Madame Restell, upon her trial, on a charge of manslaughter in the second degree, for having on the 19th of July, 1846, produced an abortion on the body of Maria Bodine, she being then pregnant with a quick child, and thereby producing the death of such child. This indictment is founded upon the Act of the 4th of March, 1846, having read which, I will state, with as much brevity as perspicuity will admit, the facts which the prosecution wish to establish, by the most conclusive evidence, and upon which we shall ask you to pronounce this woman guilty.

"(Mr. Philips then briefly presented the main facts in the case, which will be found in the reported testimony.)

"The heart sickens at such a narrative. Nature is appalled, that woman, the last and loveliest of her works, could so unsex herself, as to perpetrate such fiend-like enormities.

"The gardener watches with jealous care the seed he casts into the fertile earth, until it germs, and buds, and blooms, in the consummated perfection of nature's loveliness. But this defendant destroys the germ of nature. She kills the unborn infant; endangers, if she does not destroy, the mother's life, ruins her health: and all for the sake of the base lucre, which she allures the frail or wicked, who have fallen, to pay her, in the vain hope that she can aid them to conceal their shame. It is for you as jurors, husbands, fathers, and brothers, to say, whether these monstrous crimes are to continue; whether God's laws, and those enacted for your safety and protection, are to be violated with impunity. The community look to you for a fearless, firm, and faithful discharge of your duty. In this behalf, the progress of this cause will be watched with intense and anxious interest by your fellow-citizens.—A sacred and important responsibility has devolved upon you, the sworn conservators of their peace and their security. The spirit of truth will guide and control your deliberations; and so directed, the result will be such as your consciences can safely rest upon, and the public voice approve.

"The complainant, Maria Bodine, here came into Court with a feeble, tottering walk, and took her seat in the chair usually occupied by witnesses. She is a young woman, about 26 years of age, middling size, and evidently in a

rapid decline of health. She was neatly dressed, and her appearance created much excitement and sympathy throughout the crowded court-room.

The witness then went on to state the fact of her pregnancy, her coming to New-York, interview with Madame Restell, etc. Madame R. informed her that her price was five dollars for examination, and one hundred dollars for *operating;* that she had pills, at one dollar and five dollars per box; said it would be a very expensive job; etc., (here the witness fainted, and on being brought into court again, her counsel "insisted on her speaking loud enough to be heard by the jury, and that her answers should not be repeated by the district attorney or other of her counsel." This was, however, overruled by the Court.) Miss B. afterwards stated that Madame R. refused to *operate* until she had paid her seventy-five dollars, which she did; she then proceeded to testify as follows:

"We went up stairs; Madame Restell took the pillows off the bed, and directed me to lay on the floor, right down; I did so; she said she wanted to make an examination, to see how far I was advanced; I lay down as directed, and for five or ten minutes with her hand she made an examination; she inserted her hand up my body, in the vagina; (in a whisper, but audible, and repeated by Phillips). She hurt me very much, and I made loud groans. The reason she was so long, she said was, that I was differently situated from any one else; she could not find the right direction; she turned her hand round in my body as if she was breaking something; the operation continued from five to near ten minutes; I did not all the time lie on the floor; I got up then and sat on a chair; she told me to take a pill three times a day; she left five or six pills; I took them as she directed for two days; she left the room, but I don't recollect whether she turned the key; I was very much distressed indeed; I had my *courses* while she was in the room, and I noticed it on her leaving; I saw her again that afternoon, and told her what had occurred; I said to her I saw my courses; Madame Restell said it was nothing; I should see a little until I went through the operation; she came to me in the evening, and brought me a glass of water and a light; she said she did not think I should need her that night, but if I did I must ring the bell. Next morning, Monday, I saw Madame Restell about seven o'clock; she asked me how I was getting along; I said not first rate, as I am much distressed; I was much distressed; she said, the pills were taking effect; I felt getting worse and worse; she continued to visit me occasionally through the day; that evening, Monday night, Madame Restell slept with me; I was in great agony all the night; in the morning, Tuesday, about daylight, I took a great flooding; I had been very sick at the stomach and vomited; during the flooding she bade me get up out of the bed, and she jumped out; she told me to sit down on a stool; an earthen chamber, narrow at the bottom and broad at the top; whilst seated there, I suffered violent pain, and Madame Restell inserted her hand in my privates, and said it would make it easier for me; it gave me more pain; every pain I had I heard something fall from my body into the stool or chamber; I told Madame Restell of it; she said, be patient; one more pain and I would be through. Q. Was there anything peculiar in *the last* pain? A. I thought I was at stool, straining; I don't recollect exactly how long I might be on the stool, perhaps five minutes; I then got on the bed, as she bid me; Madame Restell again inserted her hand; she hurt me so, I hallooed out and gripped hold of her hand; she told me to have patience, and I would call *her mother* for it; she did not say anything at that time more particular in reference to my pain; when I again told her, she said my pains were *after*-pains. Q. Did you ever see, Maria, what came from you? A. No, sir, she would not let me see it. Q. Did you ask her to let you see it? A. I did, but she said it was not worth while; she would not; and she put it behind the fireplace, saying she would remove it at night; Madame Restell attended me during that night; I remained at

her house till Thursday afternoon; I had crackers and tea, the first day, then afterwards some vegetables and soup. On Thursday afternoon she came into the room and found me crying; she asked me what was the matter; I told her I wanted to go home, but I had no money to go with; if I wished to go, she said she would give me money to pay my passage and get some refreshments; she gave me a dollar; my passage-money was six shillings; she then took me down into the parlor and gave me some wine; she then said she would listen and look around to see if any officers were about; she looked out and said there were not; she said if any one arrested or accosted me, I must return to her, and I should go in a carriage; she said I must say nothing to any one about what had been done; if I told, she said we should both be liable to the state prison, as I had no right to go there, and she had no right to give me medicine, *or to do it*. My breasts pained me very much, and milk came from them over my dress; on telling her, she said, if they troubled me much, I must wrap them in red flannel, and rub them with camphor; she said, I was to draw them out with a smoking-pipe. I left Madame Restell's about three or four in the afternoon; she shook hands with me on parting, *gave me a kiss*, and told me I must never do so again; I then left. Q. Before going to Madame Restell's, had you any sensation peculiar about your stomach? A. Before and about the 17th of July, I had different sensations from what I ever felt before; my breasts were swelled, and my bowels, and I felt something flutter in my womb. Q. What was the condition of your health after leaving New-York and returning to Ramapo? A. I walked to the boat; it started a short distance from her house; I was in very, very great agony, all the while *a flooding;* the flooding continued for five weeks; after I got home my health was very bad; lumps of something like flesh or liver came from me as large as a hen's egg, and larger; I left Mr. Cook's, at Ramapo, and went to my sister's, Mrs. Youngblood, at Walden, in Orange County; this was about the 1st of September; the discharge continued to come from me whilst staying at my sister's, and *from the same cause;* I was confined to my bed for four months at my sister's; I was under Dr. Evans' care at Walden for the same cause; was flooding when he came to see me, the third day after my arrival at my sister's; other physicians visited me also; Dr. E. brought with him Dr. Martell, and also Dr. Governeur, Dr. Lewis Moore, and Dr. Thos. Moore; and Dr. Samuel Smith visited and attended me; Dr. E. attended me three months; the others about two months; Dr. Smith attended me from last April to last August; my sister's name is Maria Youngblood; her husband died about a month ago; I was constantly under the care of a physician from the time I left New-York for Ramapo to August, 1847. Q. Maria, what is the present condition of your health? A. My health is still feeble; I have constant distress in my head; pains; falling of the womb; weakness in my back; burning in my hands; weakness and trembling all over me.

"The Court adjourned a little after three, without concluding the direct examination. The witness, pale and agitated, was assisted by an officer from the stand, and left it with feeble and faltering steps, evidently laboring under severe pain about the spine and loins."

On the next (5th) day, the direct examination was continued, but nothing important elicited. In the course of the examination, the report introduces us to the following *scene*.

"Q. Had you ever had intercourse with any other person before you had with Mr. Cook?

"*McKeon.*—This is one of the questions which the witness may or may not answer. But, I advise her to answer.

The question repeated. The witness declines to answer.

"*Brady.*—This woman had for years, constantly and habitually, indulged in habits of prostitution, and she *shall* answer.

"*Recorder.*—The Court is bound to protect the witness.

"*Brady.*—No mawkish sensibility here. This woman is guilty. We

have no sympathy for her, but shall use her as we think proper. She is the felon, the instigator, the prompter. The defendant had requested her to wait her time. She would not. I shall show that the pretence that Mr. Cook *ever* had intercourse with her is false and abominable. She never was pregnant. She had for years been accustomed to have free promiscuous intercourse with men. That witness is guilty as much as the accused, and ought as much to be tried.

"*McKeon.*—I don't pretend to have a virgin upon the stand coming from Restell's house. It is an impossibility, and we do not pretend that she is a woman of immaculate character; but it is contrary to all law and all decency to criminate the witness to the extent attempted. It is not true, and I am correctly instructed as to her real character. It is not true.

"*Graham* argued the point. Her present state of health, to which the District Attorney alluded yesterday, is caused by a long course of intemperance, a constant career of prostitution, and is the natural consequence—not of Madame Restell, but of habitual and promiscuous intercourse as a harlot—not with Mr. Cook, but with every man, every hour, or every five minutes of her life.

"Here, in the midst of Graham's argument, the witness became overpowered by sickness, and was obliged to be withdrawn from the stand by the attending officer. It was with difficulty she was prevented from sinking on the floor.

"*Graham.*—I insist that the Court compel the witness to answer this question.

"*O. Hoffman*, replied.—We say the testimony is not relevant. The question is not as to her character, but whether an abortion was produced by the instrumentality of this woman, Restell.

"*Recorder.*—The Court decide that the witness may decline to answer this question; you have no right to compel her, if she refuse or decline, on the ground that it would tend to disgrace her."

The cross-examination of this poor girl was continued through two entire days; but as to the manner and the spirit in which it was conducted, we shall not trust ourselves to speak. If professional laurels, or the riches of Crœsus, are to be won in such a way, we envy them not. After a long series of questions, which, if a tithe of them were believed, would have rendered the witness herself more guilty than the miscreant culprit herself; and which questions, moreover, were wholly unsustained by the evidence afterwards brought forward, we are informed that—

"The witness here again fainted through absolute exhaustion. She was led or supported out of court. She fell, through physical inability to sustain herself against so stringent and searching a cross-examination for the purpose of sh king her testimony.

"In a little over half an hour, the witness, Maria Bodine, was returned to the stand, but still deadly pale, and her lip quivering with emotion."

This was the third time that this girl fainted from exhaustion and mental excitement; and yet, on her being returned to the stand, Mr. Brady persisted in the same line of examination, insisting, among other things, that she should state whether she had had sexual intercourse with any other person than the individual implicated, between July 1846 and April 1847, which was very properly *again* ruled out by the Court.

Dr. S. C. Smith of Montgomery, Orange Co., was the first physician who was called to the stand. He testified that he was called to attend Maria in May, after her return from New-York; that he found her in a delicate situation, with constipation of the bowels, pain in the

head, inability to move, and a very feeble pulse; complained of difficulty about the womb; on examination the womb was found distended by some foreign substance, with slight prolapsus; the *os* indurated, and painful to the touch; with a discharge, etc.; and that he came to the conclusion that she must have had a delivery of a child badly managed, or had an abortion produced upon her by some mechanical injury by an instrument, or by violence of the hand.*

The testimony of Dr. Smith is, on the whole, creditable to his intelligence; we quote what was offered on the subject of quickening.

"*Mr. Brady.*—Is there any sign or symptom by which any physician, before the fœtus has life or the woman quicken, can, with certainty, determine? A. There are certain symptoms from which we infer, but there is no certainty but quickening. Q. Cannot all these symptoms result from suppression of menses? A. There are such cases on record. Q. What do you mean by quickening? A. The motion of child or fœtus in uterus. This flutter cannot be felt from a mere change in uterus. Q. What cause does the fluttering spring from? A. I think there is no cause to be assigned. Q. At what period does quickening occur? A. Sometimes 12 weeks, up to 6 months. Q. What author says 12 weeks? A. I don't know; if I did, I would inform you. Q. At what period could you, by stethoscope, ascertain the quickening? A. At 12 weeks the pulsation can be detected by auscultation. The fluttering may be mistaken for wind or flatulence, and it is very unreliable or unsafe as a symptom, and a woman may be mistaken. Q. Had you ever a case where a woman supposed herself in labor, and was not pregnant? A. No, sir. Q. If a woman first misses her courses on May 13, could she have become quick with child on July 17? A. From missing the courses she could not be certain; but my opinion is, she could be quick. Blisters, cupping, and other counter-irritants, are applied, in cases of disease of spine; but for what I knew to be an abortion, I should not use, myself, such means."

We present, for want of space, only the testimony of Professors Gilman and Bedford.

"*Dr. Chandler Gilman.*—I am a medical practitioner of 20 years or more. I am a professor of obstetrics, or midwifery. My studies lead me particularly to cases of midwifery. Q. Does menstruation ever occur after pregnancy? A. Yes, sir. Q. Is the fact that a woman has courses distinct evidence she is not pregnant? A. There are instances of women having their menses up to confinement. There are instances on record where women have quickened at three months. Q. What is most decided evidence of pregnancy? A. Placing your ear on the abdomen, and hearing the beating of the fœtal heart. Areola is very strong and almost decisive evidence. If it exist in the case of an unmarried female, I should feel compelled to give my opinion against her. Q. If you found this areola, how far would you suppose she was gone? A. As early as 12 weeks.

"*Hoffman.*—From Dr. Evans' statements, what would be your medical opinion, as he described them? A. They would indicate that she either then was pregnant, or had recently been delivered. That she had been delivered within quite a short period. I should think this girl had had an abortion. Suppressed menstruation would not account for such symptoms. The ordinary time of quickening is about four or four and a half months.

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* It is due to Dr. Smith to state, that it was owing to his exertions solely that legal proceedings were commenced in this case, and that such testimony was adduced as to convict the prisoner. The other physicians examined were Drs. Geo. Coles and Edwin Evans; Professors Gilman and Bedford; Drs. Archer, Pratt, C. D. Smith, Covel, P. A. and S. Millspaugh, Putnam, Wilkes, etc.

"*Brady.*—Doctor, if a woman was 25 years old, and in good health, who had never missed having menstruation, would she be quick with child? A. In the ordinary course of nature, she would not be; the deep color of the areola in a woman who has had children, always remains; it cannot be produced by obstructed menstruation, according to the accredited opinion of well-informed medical men. The open state of the womb would continue for many months. Q. Had this woman been delivered, from the symptoms? A. There was nothing more than a probability that she had been delivered by violence, but a certainty that she had borne a child, and been delivered of a child. The insertion of the hand into the vagina, and certainly the insertion of the finger into the mouth of the womb, would produce abortion by rupturing the membranes. Q. What are the effects of abortion? A. Discharge of clots and masses of blood, with very great pain in small of back and lower part of belly; uterine pain might cause her to vomit; the shock to her system might, or might not, produce rigors or chills, and the violence might produce fever with the ordinary symptoms; subsequently continued discharges of blood in larger or smaller quantity, sometimes very considerable; the burning in palms of hands is one symptom of irritative fever; the opening of the womb to the size, say of a shilling, would indicate that she had been delivered; I have known it continue 6 weeks, and there is no reason why it should not continue for 6 months or a year. Q. Independent of all other symptoms, would you or would you not, form a decision and opinion, that a woman with these symptoms had been pregnant? A. I should feel compelled to say she was pregnant, even if she were an unmarried woman.

"*Cross-examined.*—Does menstruation ever continue during pregnancy? A. Every gentleman who has practised medicine knows many instances.

"*Dr. Gunning S. Bedford*, called.

"*Examined by O. Hoffman, Esq.*—Q. You are, I believe, Doctor, a professor, and well known in the profession. You hold in the University a similar situation with Dr. Gilman in the rival College? A. I occupy the chair of Obstetrics, including the Diseases of Women and Children, the same department as is filled by my friend, Dr. Gilman. This has been my particular study, and subject of attention.

"Q. Doctor, can a woman menstruate after conception? A. A woman can be pregnant, and yet menstruate. Q. After conception, at what period generally does menstruation discontinue, or rather does a single menstruation prove at all she is not pregnant? A. It does not at all. Q. What is the ordinary period when a woman quickens with child? A. In answering that question, I beg to say that physicians consider that life is perfect in the earlier months, the earliest in fact of pregnancy, and that the child is as much alive then, as at any subsequent period.

"*Brady*—Yes, but lawyers do not; there is a distinction between what you regard as life—natural life, and *legal* life.

"*Dr. B.*—I wish distinctly to be understood, and to state only facts, and well-received doctrines, as I know I am reported. Q. You are right, sir! I now renew the question. A The general rule is, that women quicken at four, or four and a half months; women will sometimes quicken at three months, and such is the difference as regards the time, that it is an accepted doctrine with the profession, that from ten to sixteen weeks are the two limits within which quickening can or will take place. Montgomery is the best writer on this special subject; the old general rule of four months has a multitude of exceptions, and they are so numerous as almost to swallow up. Q. Do you know Dr. Evans, and if so, what importance would you attach to his opinion? A. What is his christian name? Dr. Edwin Evans. A. Yes, I do; he graduated with great credit at our University. [Looking round.] Yes, there he is in the crowd; he was a very respectable and talented student. Q. Is the areola considered by standard writers an evidence of pregnancy? A. It is considered as the most striking evidence; it is regarded by

the best authorities as the most distinct and special evidence, so much so that I will briefly relate an anecdote from the celebrated Dr. Hunter.

"Dr. Bedford here related a singular anecdote recorded by the celebrated Dr. Hunter, who affirmed respecting a certain subject in his Dissecting Rooms, a young lady, whose bosom presented the areola most distinctly marked Dr. H. asserted, that she had been or was then pregnant, though during life she was regarded strictly as a virgin, and also the membrane, called the hymen, was not ruptured. Dr. Hunter's diagnosis on this most improbable case turned out perfectly correct, as the young female, on examination, proved to be *enceinte*, and a child existed.

"Q. Dr. Bedford, can you depend with confidence upon this areola? A. We can rely with almost absolute certainty upon it when distinctly marked; it usually shows itself about the fourth month of utero-gestation.

"*Dr. Bedford.*—I here wish to remark to the Court and Counsel, that I have read no testimony in this case; I give my opinion quite abstractedly and irrespective of anything which may have been previously said.

"Q. Doctor, would the mere suppression of the menses, unaccompanied by pregnancy, ever produce this distinct appearance on the breast? A. Certainly it could not produce the full and distinct appearance. Q. When does this mark or areola leave the female? A. It never entirely disappears; the breast never perfectly assumes its virgin color, but the areola diminishes after delivery; the cause of its existence having ceased, the effect declines. Q. Supposing a woman to have been pregnant, and abortion to have been produced, what would be the immediate effects of this violence? Describe, if you please.

A. It would depend on the degree and manner in which the force had been applied. In an abortion generally, as it happens, the pain would be about the same as in natural labor. The womb contracts upon the expulsion of its contents, and if rudeness or hasty violence have been used, it rapidly contracts, a discharge of blood comes on, sometimes most fearful, for abortion is almost always succeeded, or accompanied, by extraordinary flooding. This hemorrhage, or flooding, would be greater or less, according to the age of the fœtus. A woman in early pregnancy will flood more than a person further advanced. A female who is two months gone, and aborts, would have heavier flooding than one five months advanced. Q. What would be the character of the discharges after abortion? A. At the first gush, fluid; then it would be clogged, coagulated, a soft red mass in clots, and undoubtedly there would be an after-birth, of course. If much force were used, and an abortion procured by violence, the after-birth might come away entire, or in shreds; it would depend on circumstances, but most likely it would come away in shreds, fragments, separate pieces, and it only comes away entire when nature is properly assisted. If the after-birth were retained, it would decay, liquefy, become putrid, offensive.

"*Hoffman.*—What substance would the clots you speak of most resemble, that you can recollect? A. The liver that you see in market cut up in lumps, would resemble this closely; but the after-birth would be more friable. Q. If a woman was delivered by this operation, say on a Sunday, or rather on the Tuesday, would she be fit to go on a journey on Thursday, and then go about her regular house-work; or rather, to complete the question, how long would the flooding, in such a case, probably continue? A. I cannot define any period when it would terminate; it would run on, sometimes lessening, then recurring, until it destroyed life, if not arrested by proper medical treatment.

"*Cross-examined by Mr. Brady.*—Dr. Bedford, you edited, I think, an edition of Chally's Midwifery, some three or four years ago, and there have been recent editions of this book; now in that work is the areola mentioned as an infallible sign? A. I have not mentioned it as an *infallible* sign, but the best accepted writers regard it as a strong evidence of pregnancy. In fact, Mr. Brady, if I were to see a female, whether married or not, and I noticed on her breast such an areola as described, with papillæ distinctly developed

around it, I should care for no other opinion, and regard no other testimony; I should say, decidedly, she was pregnant. The appearance could be produced by no other cause whatever. Q. Doctor, there is a disease which you call dysmenorrhœa, which I understand is difficulty of menstruation: does that ever produce a change? A. It sometimes does, but the appearances are widely different. Q. What do you think of "Kennedy on Auscultation in Pregnancy"? A. Why, it is a respectable work, but I would rather not be asked an opinion unless I can praise highly. I thought Chally well adapted for the ordinary practical details of the lying-in-room, a good elementary work as a companion, or I would not have edited it for my pupils; but I do not regard it as the highest standard work. Q. Now, what do good authors state as the shortest time of quickening? A. The accepted authorities state numerous cases where it has occurred at the expiration of the third month. Some instances have happened of quickening at ten weeks. Every practical man who is an accoucheur knows of them. Q. When a woman has been pregnant three months, how much open is the mouth of the uterus in her first pregnancy? A. It depends on the constitution, and the relative size of the individual. The os tincæ would vary according to personal conformation. Q. Could any force break through the glutinous secretion with which it is closed? A. Force can accomplish anything if the heart will direct it; but the effects of any—the least interference—are sometimes dreadful. The insertion of the finger upon the part, and merely titillating the os, will in some cases produce abortion. In my opinion, the mere introduction of the hand into the vagina would produce, in a nervous, sensitive, excitable, or even ordinary temperament, hysterics, convulsions, it might be, death. Really, I ask any gentleman of common sense, to decide upon that question; it does not require a doctor. But a woman having had constant or frequent intercourse with men, might escape the abortion as produced by the introduction of the hand; the parts would not be so rigid or sensitive as in a more virtuous woman. Q. Suppose a woman was subjected to an abortion on Sunday, how soon would the fœtus be discharged? A. It depends on the degree of force employed, the actual progress or completion of the attempt. It may be in 10 hours, or 20, or 36; it may even be shorter than 10. Sometimes the womb would be thrown into contraction immediately, and abortion prove instant. The fœtus would come away at once, unless it had been destroyed; then it would come away in fragments, shreds, or piece-meal. The after-birth would follow, sometimes in half an hour, sometimes in three or four hours; but if its expulsion were long delayed, putrefaction would occur. The after-birth would come away slowly, in a putrified, offensive state, or there might be flooding, which would terminate in coagula. The female might have this dribbling—draining of blood—for months and months, and then it would destroy her at last, if proper medical means were not used to arrest it. Q. If the after-birth were so long retained, how would it at last be disposed of? A. It would come away in a liquid state, as I have said, wasted; a deciduous membrane, something like wet blotting-paper, is sometimes thrown off in difficult menstruation.

"*By Hoffman.*—Q. Would the facility of entering the vagina, or the womb, increase according to the advance in pregnancy? A. Certainly—but the danger would increase too. Q. Supposing the hand were introduced and worked round and round, *so*, as has been described, what would be the effects? A. The most horrible. Q. Could a wire be under the finger at the time of such an operation? A. *Undoubtedly, that's the way the thing is done!* [Great sensation throughout the Court.] Q. Doctor, at what period in gestation does a woman's size begin to alter?—Truth is our object, and we must endeavor to attain it, by every inquiry. We are all *groping* in the dark—

"*Graham*—(interrupting.)—Yes, Mr. Hoffman, but we must *grope* according to *law*.

"*Answer by Dr. Bedford.*—Very soon after pregnancy. Some females will have the appearance of pregnancy as early as three months. It depends upon the make, the conformation, and general physical causes.

"*Graham.*—According, of course, as the clothes fit.

"*By Hoffman.*—At what period, then, does the rotundity of the figure increase, so as to require a female to unhook her dress?

"A. That does not fall exactly under my department. But there is undoubtedly a change in rotundity so early as the third month."

The medical testimony offered on the defence, we regret to say, was not such as to do any great credit, either to the individual witnesses, or the cause of medical science.

The defence set up that the principal witness, Miss Bodine, was laboring under venereal disease at the time, and was an abandoned, dissolute girl, failed in every particular. And yet the counsel, Mr. Brady, thus spoke of her in his opening speech:

"And this woman, the prosecutrix, it will be our solemn duty to prove, and we have facts to sustain us in the assertion, that that woman is as foul, corrupt, loathsome, guilty thing, as ever polluted God's blessed earth by her pestilential presence.

"This girl was ill of a disease about which there ought to be no mawkish sensibility in giving it its right name. I have the physician to produce who attended her for it, and the messenger who carried the medicine. She was then laboring under the effects of the malady. She had ulcers in her throat, and sores upon her person. She utters in this Court a direct and brazen falsehood. She has upon that stand committed a deliberate perjury, when declaring her freedom from foul disease. I am instructed to say and to prove, that at an early period of her life, she gave herself up to this licentious course of general and promiscuous concubinage; and so precocious was she, that at a very early term of comparative youth, so thoroughly corrupt and abandoned had this girl become, that she had destroyed her health, her character, and her family reputation.

"Our evidence will be abundant and overwhelming. Every material fact in her statements will be contradicted by the most respectable, the most irrefragable testimony; and I will hold her up before you, on the sternest testimony, begrimed and blackened with every enormity that can degrade or vilify woman."

We have read the trial, but we find no such testimony recorded.

The prisoner, as is well known, was found guilty, and sentenced to one year's imprisonment in the Penitentiary.

On one point, we feel disposed to venture a remark. We have already alluded to the extraordinary course adopted by the counsel for the prisoner. In justification, Mr. Brady, in opening the case for the defence, thus spoke:

"As regards the performance of my duty to those who confide to me the defence of their freedom, property, or reputation, I at once and without hesitation say, that as Counsel, I make the case my own. Their interests, their success, are incorporated, identified with mine. My client is myself. This is no new doctrine for Counsel to advance, no new principle for the bar to defend.

"In the language of that great and distinguished lawyer, Lord Brougham, a man whose equal the world has seldom seen, as regards profound sagacity and lofty universal talent, I believe that Counsel when retained, and a case committed to their trust, know then but that one person in the world; and the only office, the sole single duty they have to perform, is to protect that person at all risk, all sacrifices, all hazards. In that celebrated case, the trial of Queen Caroline, (from which Mr. Brady quoted a splendid passage,) that is the language employed by the greatest man of the age, as scholar, jurist, and universal genius. His doctrine I adopt, and with him (though treading in his footsteps at an immeasurable distance,) I am content to err.

According to my feeble capacity, I will defend that lady with the whole of my energies, and at all hazards. I am here as the advocate and friend of that woman in the hour of her misfortune and the day of her adversity, to secure for my client a fair and impartial trial, and to obtain for her that acquittal to which she is undoubtedly entitled. For what cause is the accused put on her trial this day? It is not for one crime, it seems, but for a series of crimes. She is in fact dragged here to answer for all the past transgressions of her life: and the jury are called to pass not upon this single indictment, but upon other alleged iniquities, and to give a verdict not upon any one individual act, but upon her deeds and actions for the last ten years."

We have a high respect for Mr. Brady, but we have no respect at all for the principle here laid down,—we care not, whether Lord Brougham or any other Lord defend it; we are ready to show that it cannot stand, when regarded in the eye of justice, or of morals. "When counsel is retained, then," says Mr. B., "the sole single duty they have to perform, is, to *protect that person, at all risks, all sacrifices, all hazards.*" But, by what law, human or divine, is any man compelled to defend the guilty? By what code of morals can he attempt to screen the latter? We allow it is a noble, a divine thing, to defend injured innocence, to protect the weak, and the oppressed, when unjustly accused. But where, we ask again, will Mr. Brady find his argument for declaring the guilty to be innocent, and thus pledge his character for veracity to shield the blood-encrimsoned abortionist, whose foul offences cry to heaven for vengeance? If this doctrine, and the practice which grows out it, does not lead to the increase of crime, then it is difficult to conceive what circumstances would. Mr. B. speaks of the conviction of the prisoner as a "misfortune," and expresses the belief, that she ought to walk forth from the trial, "*innocent, perfectly innocent* of the offence alleged, with *reputation unstained*, and *character unblemished!!*" If such is a specimen of the manner in which the *guilty* are to be *defended*, and *innocent witnesses punished*, then farewell to all hope of deterring future Restells, and Costellos, from treading in the footsteps of their much-injured, and "innocent" predecessor!

In conclusion, we are persuaded that these rules of action, as laid down by Mr. Brady, cannot be sustained by any arguments possessing the slightest weight whatever. They are not the rules which regulate the practice of the strictly conscientious lawyer, however they may be bolstered up by the opinions of high legal authority. If the profession of the law be well calculated to subserve the ends of justice, it is only when administered with fairness, honesty, and impartiality; by presenting, in their full force, all arguments in doubtful cases, leaving them for the judge and jury to weigh, and consider. We see no necessity for violating the limits of truth and justice, even in defending such a vile miscreant as Madame Restell; there may be arguments in her favor, or possibly justifying or palliating circumstances, deserving consideration, testimony to be scrutinized and sifted, etc; but this does not oblige her counsel to express their solemn conviction that her cause is just; that she is an innocent, persecuted woman; when they honestly believe the very reverse. An advocate who should take this ground, would doubtless err as much against truth and righteousness as any other man who should make the same assertions. Can any man believe that such a course, now so often observed in our civil and criminal courts, can possibly answer the great ends of

justice, and morals? Are not lawyers, like all other men, *moral agents;* can they put off this character, by putting on a professional one? If not, are they not bound to be truthful in all their statements, and sincere in all their pleadings and exhortations? Are they not, like the physicians, and all other men, bound to use their moral character for moral ends? But do they do this, when they aim to bolster up the bad cause of their clients, by making moral subservient to professional ends,—selling themselves, soul and body, to their client, as well as their learning and skill? We have supposed, that the obligations to be good men, and true, were more imperative, than to be successful lawyers. But it seems we were mistaken. We deem these remarks not out of place, because we have seen so many instances, of late, where these principles have been grossly violated. Again, and again, has this guilty woman, as well as others engaged in the same nefarious business, been arraigned for the same offence; but the meshes of the law became large enough, through the ingenuity of counsel, to serve as loopholes of retreat, and they passed from the criminal court into their splendid coaches, with all the airs of triumph and exultation which belong to injured innocence when escaped from peril. They have gone on, year after year, glorying in their shame; defying the law, outraging decency, and laughing at morality; well knowing that the best talent, skill and learning of the bar, were always at their service. For years, our municipal authorities have had police officers stationed before the door of this atrocious *pregcatrix*, warning the unwary and the beguiled from her deadly precincts; the press has teemed with warnings against her practices; the medical profession has done its utmost to bring her to justice,—but she has found her safety thus far in the ingenuity of the bar: this has been her shield and protector; her faith in the omnipotence of money was firm and unshaken. How has *she* beguiled the legal profession? as one designed to promote the great ends of justice, and morality? We trow not! These remarks are made more in sorrow than in anger. To a large majority of the members of the bar, we believe they will not apply; we look upon the legal profession as designed, and eminently fitted, to promote good morals, and the best interests of society; and we hold moreover, that it may subserve all the ends of justice, without demanding, on the part of an advocate, the slightest insincerity, or violation of truth. Certain we are, that it is only when practised in subordination to moral ends, that it takes rank among the noblest and most honorable occupations of man.

ART. XIV.—*A Medico-Botanical Catalogue of the Plants and Ferns of St. John's Berkly, S. C.* An Inaugural Thesis for the Degree of M. D. in the Medical College of South Carolina, etc. B. F. P. PORCHER, Charleston, 1847, (8vo. p. 55). [Prize Essay.]

THIS is an exceedingly creditable performance, as an Inaugural Thesis, and is the result of a vast deal of labor and investigation. We have first presented "*A Medico-Botanical Catalogue of the Plants and Ferns of St. John's, S. C.*" occupying 34 closely-printed pages; and

then "*a Catalogue of Phanogamous Plants and Ferns, native, naturalized and exotic,*" growing in the same region. The plants are arranged alphabetically, instead of being grouped under the natural orders, as we could have wished; although each method undoubtedly has its advantages. The Bibliographical references are very full and complete, and enlarge much the value of the essay. There are some points, perhaps, open to criticism; but, on the whole, the production is characterized by great accuracy and judgment. We trust that other medical students will follow the example of Dr. Porcher, so that, ere long, we may have complete catalogues of the plants growing in various locations, in every State and Territory of the Union.

ART. XV.—*Chemistry of the Four Seasons: Spring, Summer, Autumn and Winter.* An Essay, principally concerning Natural Phenomena, admitting of interpretation by Chemical Science, and illustrating passages of Scripture By THOMAS GRIFFITHS, Professor of Chemistry in St. Bartholomew's Hospital, etc. Lea & Blanchard. Philadelphia, 1846, (8vo. pp. 450).

THIS is one of the most entertaining scientific works with which we are acquainted; all the phenomena connected with the four seasons are explained and elucidated in accordance with the facts and laws of chemistry, so that a person altogether ignorant of this science could scarcely adopt a better mode of becoming initiated in its principles than by a careful study of this treatise. "Chemistry," in the language of Davy, "is a science which has its moral and intellectual, as well as its common uses; its object is, not only to apply the different substances in nature for the advantages, comfort and benefit of man, but likewise to set forth that wonderful history of wisdom and intelligence, which is written in legible characters both in the Heavens and on the Earth." It is a work of special interest to medical students, as well as those engaged in the practice of medicine; it abounds in interesting and useful information to the general reader, while its experimental illustrations are of the simplest character, and do not involve the necessity of costly apparatus.

PART THIRD.

American Intelligence and Editorial.

Action of Medicines.—Professor Blake, of the St. Louis University, has published a valuable paper in the Nov. Number of the St. Louis Medical and Surgical Journal on the subject of the Action of Medicines, containing the results of numerous experiments, made during the last few years. The principal objects which Dr. B. has aimed to ascertain are, "whether medicines act by being taken into the circulation, or whether they produce their effects by impressions made on the nerves of the part to which they are applied, which impressions are capable of strongly modifying the functions of the nervous centres, and by this means re-acting on the whole system?" Another question which he has attempted to solve, is, whether "when a substance is absorbed into the blood, do the re-actions it gives rise to, depend on the chemical properties of the substance used? or in other words, are the reactions between the elements of the blood and tissues and inorganic compounds, governed by the same laws when taking place in living animals, as they are when these same elements are mixed together out of the body, and no longer forming a part of the living organism?" With respect to the first point, viz.: the absorption of medicines into the blood, before acting upon the system, after stating the opposite views entertained by physiologists on this subject, Prof. B. states, that a carefully-conducted series of experiments has convinced him, that an appreciable interval of time always elapses between the application of a poison to a mucous surface, and the appearance of the first symptoms of its action, the interval varying in different animals. For example: half a drachm of anhydrous hydrocyanic acid, applied to the tongue of a large dog, produced no effect until *eleven seconds* had elapsed; the respiration then became affected, and the animal was dead in *thirty* seconds from the time the poison was introduced. When the animal was made to respire through a tube introduced into the trachea, a longer interval elapsed between the application of the poison to the mouth, and the appearance of the first symptoms of its action, owing, in the opinion of Dr. B., to the poison having a longer distance to go before reaching the brain; "for," he observes, "owing to the great volatility of the thing, hydrocyanic acid, it is instantly converted into a vapor on coming into contact with so warm a surface as the mouth; it thus becomes inhaled into the lungs, and is there absorbed by the mucous surfaces, and reaches the brain through the pulmonary veins, the left cavities of the heart, the aorta and carotids; whereas, when it is prevented from entering directly into the lungs, it has, in addition to the above course,

to pass down the jugular vein, into the right side of the heart, and through the pulmonary artery."

The difference in the two cases amounted, however, to only five or six seconds. The uniformity of this result would seem to establish very conclusively the correctness of the explanation above given.

In experiments with the alcoholic extract of *Conia* obtained from the seeds, Dr. B. found, on injecting a small quantity in solution into the femoral vein of a dog, that fifteen seconds elapsed before the slightest symptoms of its action manifested itself. The animal then became convulsed, and died in 30 seconds after the administration of the poison. This experiment was repeated four times, and in no instance did any symptoms appear in less than 15 seconds.

Having procured some *Woorari* poicon from Sir B. Brodie, Dr. B. injected five grains of it, dissolved in water, into the jugular vein of a dog; no symptoms of the action of the poison showed themselves until 20 seconds had elapsed, and the animal died in 45 seconds.

Strychnine was also extensively used by Dr. B. in his experiments; five grains in solution being injected into the jugular vein of a dog, spasms were first observed about twelve seconds after the poison was introduced, and the animal died in a minute and a half. The results of all the experiments on this subject justify the inference, that an interval always elapses between the application of a poison to any part of the body and the appearance of the first symptoms of its action; and, therefore, that there is no reason to believe that poisons ever act by a direct impression produced in the nerves of the part to which they are applied.

As the rapidity of the circulation differs considerably in different classes of animals, Dr. B. remarks, that "it is evident that, if a poison acts by being carried to the nervous centres through the medium of the circulating fluid, it must reach the brain most rapidly in those animals in which the circulation is quickest." He accordingly made experiments on the horse, dog, rabbit, fowl, and goose, using, for the most part, *Woorari* or *Strychnine*.

On the horse, six grains of Strychnine, injected into the jugular vein, produced the first symptoms of its action by slight twitchings of the muscles of the thorax, in *sixteen* seconds; in seventeen seconds the animal fell like a mass of marble, every muscle being in a state of the greatest rigidity; the animal died in tetanic spasms *four* minutes after the injection of the poison. When strong doses of concentrated hydrocyanic acid were poured on the tongue of the horse, no symptoms were perceived until after an interval of from twelve to seventeen seconds. It will be observed, that the time required for these poisons to act, when introduced into the veins, or applied to the mouth of the dog, was from eleven to twelve seconds, an interval of four or five seconds less than the time required to produce any effect upon the horse. In the *fowl*, the interval was still shorter; a grain and a half of strychnine, introduced into the jugular vein, producing convulsions in six and a half seconds, and in eight seconds causing the death of the animal.

In the *rabbit* the interval was only four seconds and a half, the animal dying in seven seconds; the hydrocyanic acid was found, in some instances, to act in less than four seconds, when poured on the tongue. These experiments on different animals were often repeated by Dr. B., and always with the same results. It it thus proved, that in different animals the interval varies that elapses between the time when a poison is applied to the tissues or

mixed with the blood, and the appearance of the first symptoms of its action —it being sixteen seconds in the horse, and four and a half seconds in the rabbit. If poisons acted by an impression on the nerves of the part to which they are applied, they should act with equal rapidity on all animals, which is not the fact. The conclusions arrived at by Prof. B. are the following.

I. That an appreciable interval always elapses between the administration of a poison and the appearance of any symptoms of its action.

II. That this interval varies in different animals, being shorter or longer, according to the size of the animal and the rapidity of its circulation.

III. That the nearer the point at which the poison is introduced into the system is to the brain, the more rapidly are its effects manifested.

By another series of well-devised and skilfully-executed experiments, Prof. B. has shown that the time required for the blood to complete the whole round of the circulation in the *horse*, is about twenty seconds; in the *dog*, from ten to twelve seconds; in the *fowl*, six seconds; in the *rabbit*, four and a half seconds; thus furnishing a most striking agreement between the numbers furnished by the two series of experiments; an agreement so close as to render it impossible not to admit an intimate connection between the action of poisons, and the circulation of the blood; the periods of time, in fact, being coincident.

The paper of Prof. Blake is an extremely valuable one, and we hope he will favor the profession with the results of farther investigations connected with this important subject.

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Medical Associations, Reform, etc.—The work of Medical Organization and Reform goes bravely on. Old Medical Societies are being revived and invigorated, and new ones formed where none existed before. During the last few weeks we have received the Constitutions and Proceedings of three new Societies, viz: one State and two District. They all enter on the work of cultivating Medical Science with an earnestness characteristic of the present day; and they all speak one voice in regard to Medical Reform, warmly approving of all the measures adopted by the late National Conventions. Indeed, the profession throughout our entire country seems to have become thoroughly awakened to the importance of elevating and advancing its condition in the great scale of human society. But it was our intention, at this time, to notice more particularly the organization of the "Medical Association of Southern Central New-York." This Association was organized in September last at Owego, in the County of Tioga. It is composed of "all regularly-educated Physicians and Surgeons, of good moral character, within the limits above specified, who shall unite themselves in the promotion of the objects of this Association."

The 'limits' referred to, are the Counties of Broome, Cortlandt, Chemung, Tompkins, and Tioga. We will copy the Constitution and Regulations of this Association, for the purpose of making some comments which we hope may be of some benefit to those who may engage in the organization of other similar institutions. They are as follows, viz.: "Resolved, That it is expedient to organize a District Medical Association. Believing that the standard of Medical education is now too low, and as a consequence, that many are to be found in the ranks of the profession, who, although clothed with the doctorate, are disqualified for its high and responsible duties; and further, that our organization, duly perfected, may be conducted so as to speak, in its

transactions, the united views and purposes of the Medical Profession, thereby rendering more efficient and available, the means for promoting true Medical Science; and for enlightening and correcting a distorted public sentiment, in reference to the healing art; and also, that it is necessary for emulation and concerted action in the profession; and finally, but not least, for securing a brotherly and friendly intercourse between all who are the commissioned agents of its responsibilities: therefore, be it Resolved, That this Convention organize a voluntary Medical Association, and adopt the following *Regulations*.

Art. 1st. This Organization shall be called "The District Medical Association of Southern Central New-York."

2d. The regular meetings of this Association shall be held annually, at such time and place as it shall from time to time direct.

3d. This Association shall be composed of all regularly-educated Physicians and Surgeons, of good moral character, within the limits above specified, who shall unite themselves in the promotion of the objects of this Association.

4. Physicians of reputable standing, evidence of which must be abundantly shown, beyond the mere possession of a license or diploma, who may wish to become members of this Association, can do so upon the recommendation of a member of this Association, by receiving a vote of three-fourths of the members present at any regular meeting. Medical Students of good reputation may, upon the recommendation of a regular member of this Association, be received, by the vote of three-fourths of the members present, but not be entitled to vote, or subject to taxation.

5. The Officers of the Association shall be a President, two Vice Presidents, a Recording Secretary and an Assistant, a Corresponding Secretary, and a Treasurer, who shall be elected annually, by ballot.

6. The President shall preside at all the meetings of the Association, preserve order and decorum, having a casting vote whenever there is a tie, and perform all the duties customary in such deliberative bodies. In the absence of the President, the oldest Vice President shall preside at such meetings.

7. It shall be the duty of Secretaries to record the proceedings of the meetings of the Society, read communications, read the names of members, arrange and procure the publication of all papers so ordered by the Society.

8. The Treasurer shall have charge of all funds of the Association, and report annually the amount received, from whom received, and how expended.

9. No funds shall be drawn from the Treasury, except by an order from the President, authorized by a vote of the Association.

10. The President shall, at each annual meeting, appoint two members of the Association from each county, to present written communications on subjects connected with the profession.

11. This Association shall have power, by a vote, at its regular meetings, to tax its members any sum it may see fit, to meet its expenses, not exceeding two dollars a year for each member. It shall have power, also, to inflict such fines and penalties as it may see fit, for the non-performance of any duty imposed, and to expel any member for unprofessional or disorderly conduct, or engaging in, or countenancing in any way, the various systems of quackery in vogue in our land, or for any conduct derogatory to the honor and good name of the profession.

12. No member of this Association shall engage in making, vending, or using, of any secret remedy or nostrum, in his practice, or consulting with those who do use them.

13. This Association shall be governed by the system of Medical Ethics adopted by the American Medical Association.

14. There shall be a Standing Committee of three in each county, to report to the annual meetings of this Association upon the endemics and epidemics which have prevailed, during the year, within the territory embraced by this Association, giving in full their etiology, treatment and pathology.

15. It shall be the duty of every member of this Association, in attendance at every regular meeting, to report at least one case that has occurred in his practice during the year, embracing its history, treatment, and pathology.

16. This Association shall appoint, at its annual meetings, two or more delegates to attend the American Medical Association.

17. Every member of this Association shall affix his full signature to this Constitution.

18. Any alteration or amendment of the above rules and plan of organization, may be made at an annual meeting of the Association, by a vote of three-fourths of the members present."

We would particularly call the attention of those of our readers who are interested in such association, to the importance of the fourteenth rule above quoted. If every Medical Society in our country would adopt the same rule, and in carrying it out, require their committees to note, in connection with the endemics and epidemics coming under their observation, the season of the year, the temperature, the soil of the district affected, the state of its surface and the condition of the atmosphere in respect to electricity, moisture, etc., we have no doubt but a flood of accurate knowledge would soon be accumulated in regard to the causes and pathology of all that class of diseases. We would suggest, however, that the *tenth* rule is altogether too indefinite. We know that it is a rule very generally adopted by similar Associations; and, so far as our experience goes, almost as generally neglected in practice. It seems to us that Medical Societies would do much more for the promotion of medical science, and the improvement of their own members, by assigning to their committees specific subjects for investigation. By doing this, they would be more certain to elicit a report or essay on the subject; they would also induce a more thorough investigation of the same, and by making a judicious selection, they might be constantly turning the attention of members to new subjects of inquiry; while, by the present mode, very few individuals will take the trouble to write an essay, except on a subject with which they are already familiar, and consequently the writer himself is not much benefited by the exercise, and the society seldom entertained with anything out of the ordinary range of subjects well known to the profession. Again; every Medical Society or Association should embrace in the range of subjects to which it especially directs the attention of its members, the Indigenous Medical Botany of its own district; and so much of the general subject of Hygeine as relates to the natural sources of disease in the several localities embraced within its limits. For we hold it to be as much the duty of our profession to point out the public sources of disease, and thereby as far as possible protect the community, as to cure disease after it has occurred.

N. S. D.

Address of the State Medical Convention, to the Governments of the several States, on the subject of a Registration of Births, Marriages and Deaths,—and the Report of the Committee appointed to prepare a Nomenclature of Diseases adapted to the United States, having reference to a General Registration of Deaths.

[It is hoped that every opportunity will be embraced by the members of the profession all over the Union, to urge the adoption of Registration Laws, by the State Legislatures.—*Ed. Jour.*]

The United States National Medical Convention, assembled in the City of Philadelphia, in May, 1847, desirous of the promotion of the true and vital interests of the people of their common country, in all their varied locations, circumstances and conditions, do respectfully recommend to the governments of the several States of the Union, the adoption of measures for a General Registration of the Births, Marriages, and Deaths, which may occur within their respective borders.

No effort need here be expended in elucidation of the more ordinary purposes for which such a Registration should be universally adopted, such as proofs of lineage, rights of dower, and bequests of property. The importance of these cannot but be perceived on the least reflection.

But there are reasons more profound and far-reaching, results more important to the welfare and glory of man, obtainable by this measure, which not only justify, but demand its early adoption, and thorough consummation.

There are two facts to be noticed in this connection, which may not be denied:

First. Upon the circumstances connected with the three important eras of existence, birth, marriage and death, are dependent, to a very great extent, the physical, moral and civil condition of the human family.

Second. A knowledge of these circumstances is necessary for a full comprehension of important means for the certain advancement of the population of States, in prosperity and civilization.

To the political economist and vital statist, the laws which regulate and control the lives and destinies of the people of the present, cannot be a subject of indifference; to the legislator and statesman, ignorance of them is a bar to the full appreciation of their responsibility to the people of the future. The *philosophy of increase of population* is intimately connected with, and dependent upon, the proposed measure, and can be properly learned only from its facts and deductions. In countries longer settled than ours, this science has come to be one of profound importance to those who are called to legislate for the future as well as for the present. For example:—The population of England has increased, as the census proves—and the excess of births over deaths leaves beyond a doubt—in a geometrical progression for forty years, and at a rate by which, if continued, it will double every forty-nine years. Whether the means of subsistence keep pace with that increase, or whether the density of population will, ere long, be too great for its area, are important questions to be decided by their own statesmen.

An increase of population has, however, nothing in it irresistible or inexorable; *it consists in nothing but an increase of the births over the deaths*—and will be suspended if the births cease to maintain the same ratio to the population; and the births may always be reduced rapidly, by retarding the period and number of the marriages, without taking into consideration the increase by immigration. Circumstanced as this country is now, with its millions of unreclaimed acres, its exhaustless resources of subsistence and wealth, in its mountains and valleys, in its mines, rivers and forests, it would be judicious to invite, even with the vast immigration to be expected, rather than discourage, an increase of a native population, by encouraging early marriages, provided that thereby immorality or misery in any form will not advance with them.

But before we can make any recommendations on this subject, or before we can even intelligently discuss it, we must have a knowledge of the facts as they are. By commencing a Registration now, our sucessors will be furnished with the necessary material in time for any exigency that may arise.

Conclusive evidence is furnished to us of the value of a well-digested system of Registration for the improvement of the people in their moral and physical condition, and in the length of their lives. From the facts obtained thereby, are deducible the rules and inferences of health, and the sources of disease and premature mortality—many of which need but be known to be avoided. Coincident with improvements in the health and condition of individuals, are increase of years, and advancement in private and public morals, and in the strength and virtue of the State.

Among the first communities to establish a system of Registration of Births, Marriages and Deaths, was Geneva, where it was begun as early as 1549, and has since been continued with great care. The registers are there viewed as pre-appointed evidences of civil rights, and it appears that human life has wonderfully improved since they were kept. The mean duration of life increased more than *five times* from 1550 to 1833; with the increase of population, and more prolonged duration of life, *happiness also increased;* though with advanced prosperity, marriages became fewer and later, and thus the number of births was reduced, a greater number of infants born were preserved, and the number of adults—with whom lies the true greatness of the State—became larger. Towards the close of the 17th century, the probable duration of life was not 20 years—at the close of the 18th century it attained to 32 years—and now it has arrived to 45 years; while the real productive power of the population has increased in a much greater proportion than the increase in its actual number, and *Geneva has arrived at a high state of civilization.*

These results, so glorious for individuals, for the community, and for humanity, are derived from the better knowledge and understanding of the science of life and health, the data for which are furnished by the statistics of the Registers.

The information obtained by the Natural History surveys which have been made of many of the States of the Union, is directly interesting to only a very small number;—while the facts and inferences deducible from a sanatory survey and registration, interest and benefit, directly, the great mass of the people, for all are interested in their personal condition. Thus are produced in them more expanded views of the worth of life and the necessity for its preservation; a more thorough appreciation of the importance of purity in the principal sources of its continuance, air and food; more attention to the comforts of dwellings and clothing, more refined sensibilities, greater energy, and a better-regulated state of public and private morals. These results *have been obtained in Geneva.*

In Prussia, these measures are attended to in a mode deserving the highest commendation. Every fact relating to the health, lives and condition of the population, is there collected with great care by a central officer at Berlin, and published for the benefit of the people. The most beneficent results have accrued from the admirably-arranged statistical returns made for several years past in England. Of more than one large town, but of Liverpool especially, it was ascertained that the mortality was great, and the average age at death of the population low; whereas before, the inhabitants had boasted of their salubrity and longevity. The registration has, to them, truly proved the means of increase of health and years, after removing from their eyes the scales which blinded them to their own destruction.

In many of the European States besides those mentioned, facts in connection with this subject are registered and collated in the most scientific and systematic manner; and, to use the language of a distinguished American statist, whatever we Americans may say to the contrary, the average longevity, in many places, where these measures have been in operation, appears greater than with us." Indeed, we have no little reason to apprehend that,

unless something is done to arrest the progress and pressure of the causes of premature mortality in this country, we shall be in danger of possessing only a very young and immature population. The average age of death in many of our large cities, as far as returns enable it to be shown, is under 20 years; a fact which can only be due to the unfavorable physical circumstances of the people, and their ignorance of the true means of living and avoiding disease.

The registers of the ancient Romans, which were preserved with great care, and recorded the births, sexes, periods of puberty, manhood, age at death, etc., kept by order of Domitius Ulpianus, prime minister of Alexander Severus, afford us the means of ascertaining the mean duration of life in Rome nearly 2000 years ago, and comparing this with the results of estimates made at the present day in places where similar records are kept, we are thus enabled to establish the gratifying fact of the great extension of the average period of human life in various cities and countries.

Of the results obtainable by the suggested measures, in connection with the census returns now regularly made in each of the United States, not the least important and desirable are *tables exhibiting the probabilities of the expectation of life.*

By this simple and elegant method, the mean duration of life, uncertain as it appears to be, and as it *is*, with reference to individuals, can be determined with the greatest accuracy in nations, and in still smaller communities. This is important, not merely in reference to the payments of life annuities, and the business of life insurance, whose great value is but just beginning to be felt in this country, but it is of inestimable interest, as determining to individuals their probabilities of living in their different classes, occupations, locations, and habits. "As it might be expected from the similarity of the human organization, that all classes of men would, *cæteris paribus*, live, on an average, the same number of years, it becomes important to ascertain whether this be the case; and if it be not, to determine to what extent life is shortened in unfavorable circumstances.

The life table answers this purpose, and is as indispensable in sanatory inquiries as the barometer or thermometer, and other instruments, in physical research. Upon applying it to any number of well-selected cases, the influence of any external cause, or combination of causes, can be analyzed; while without its aid, and extended observation and calculation, we are liable to be misled at every step by vague opinions, well-concocted stories, or interested statements, in estimating the relative duration of life; which can no more be accurately made out by conjecture, than the relative diameters of the sun, moon, and planets of our system."*

If these things are so, and of their truth there cannot remain the shadow of a doubt, it is plain that with this measure are entwined the highest earthly interests of humanity; and it belongs to the legislators of the New World, the guardians and custodians of the interests and glory of the American Republic, to consider well ere they longer postpone the adoption of a measure so essential thereto. "A comparison of the duration of the successive generations in England, France, Prussia, Austria, Russia, America, and other States, would throw much light on the physical condition of their respective populations, and suggest to scientific and benevolent individuals in every country, and to the governments, many ways of diminishing the sufferings, and meliorating the health and condition of the people; for the longer life of a nation denotes more than it does in an individual,—a happier life—a life more exempt from sickness and infirmity—a life of greater energy and industry—of greater experience and wisdom. By these comparisons, a noble national emulation might be excited, and rival nations would read of sickness diminished, deformity banished, life saved—of victories over death

* Fifth Annual Report of the Registrar-General in England.

and the grave,—with as much enthusiasm as of victories over each other's armies in the field; and the triumph of one would not be the humiliation of the other, for in this contention none would lose territory, or honor, or blood, but all would gain strength."—(*Idem.*)

Signed on behalf of the National Medical Convention, Philadelphia, May, 1847.

JONATHAN KNIGHT, M. D., Conn., *Presd't.*

ALEX. H. STEVENS, M. D, N. Y.
GEO. B. WOOD, M. D., Pa.
A. H. BUCHANAN, M. D., Tenn.
JOHN HARRISON, M. D., La.
} *Vice Presd'ts.*

RICHD. D. ARNOLD, M. D., Geo.
ALFRED STILLE, M. D., Pa.
F. CAMPBELL STEWART, M. D., N. Y.
} *Secretaries.*

The Committee appointed "to prepare a Nomenclature of Diseases adapted to the United States, having reference to a General Registration of Deaths," beg leave to submit the following

REPORT.

No subject is more intimately connected with the prosperity and happiness of a people than the degree of their public health. Some places and some circumstances are known to be more favorable than others to the development and prolongation of the vital energies of man; and it is a matter of great moment to the whole population collectively, and to each one individually, to know what facts exist in the place selected for residence, which influence its character in this respect. No subject which can claim public attention should excite greater interest than that of obtaining a knowledge of the diseases and causes of death in operation among us. It is of great consequence to all of us to know when, where, in what form, and under what circumstances, sickness and mortality take place; and whether they are uniform, or dissimilar in different places, or in the same place in different seasons, and under different circumstances. Wherever this knowledge is possessed, remedies for the amelioration or extinction of existing evils can be applied more intelligently, and with better hope of success.

Fortunately there is a mode by which this information may be obtained, and by which the force of mortality pressing upon a people may be, in some respects, weighed and measured. This mode is, uniform and accurate registration of the causes and locality of death, and intelligible abstracts of those causes. This matter may be illustrated by the facts we already possess.—Let the whole force with which mortality presses upon us be represented by 100. It appears by the Fourth Report of the Registration of Births, Marriages and Deaths, in Massachusetts, for 1845, page 55, that of 10,000 of all the deaths by known causes that year, 667 were by *scarlatina*. This disease then, or this form or force of mortality, pressed upon us 6·67 per cent. of all forms or forces. It appears by the same Report, on page 82, that of 10,000 deaths 651 occurred in May and 1095 in September; showing that the proportional force of mortality was 68 per cent. less in the former than in the latter month. In 10,000 deaths in five different towns of the same population, 150 may occur in one and 300 in another, showing a different force in those places of 100 per cent. In this manner may this force be weighed and measured in all its details. The correctness of this measurement depends, however, upon the degree of accuracy by which the facts are registered and abstracted. A uniform and systematic plan of *registration* and *classification* is essential to secure this accuracy. From an extensive examination of the statements of deaths in different places in the United States, it appears that the same disease is sometimes given in one place, under a name different from that of the same disease in another place, and even in the same place, the same want of unformity exists in regard to the names of dis-

eases in different periods. This is a great evil; and it must be obvious that, so long as it exists, it will be difficult, if not impossible, to make a statistical abstract, on which to institute accurate comparisons of the prevalence of different diseases, or of the health of the people in different places or in different periods. To remedy this evil, the plan of a nomenclature and classification of diseases contained in the appendix is proposed. It is intended to apply uniformly to all sections of our country.

Registration.—The following rules should be observed in registering the cause of death.

I. *Give causes of death the right names; and such as have the same meaning at all times, and in all places.*

Consumption, cancer, or any other name, for instance, should not be given when death was produced from another cause. The same name should, as far as possible, be uniformly used in every section of the United States.

II. *Such names should be used as would give a clear definition of the cause of death.*

Such terms as "fits," "infantile disease," "inflammation," "decline," "sudden death," etc., without specifying what kind of fits, what infantile disease, what inflammation, the cause of decline, or of sudden death, are improper. The particular disease, or cause of death in each case, should, as far as possible, be stated.

III. *A single word, or the least number of words possible, which would give this clear definition, should be preferred. Popular names may be used, but where no popular name in a single word is found, a technical or scientific term should be preferred.*

According to this rule, *consumption* would be preferred to phthisis; *croup* to cynanche trachealis; *pneumonia* to inflammation of the lungs; *enteritis* to inflammation of the internal membrane of the bowels, etc. By uniform use, the people would soon become familiar with scientific terms.

IV. *When more than one disease or cause have concurred in producing death, they may be written under each other without being connected with other words or particles, and in the order of their appearance.*

V. *State as nearly as can be known by numbers, the duration of the disease or diseases, if more than one has occurred in producing the event, in years, months, or days.*

This would supersede the use of the words 'sudden,' 'acute,' 'chronic,' etc., and which often convey indefinite ideas. The suggestions of the Seventh Report of the Registrar-General in England, should be observed in this connection. The duration of the diseases in these returns will always be considered to imply the time intervening between the first appearance of well-marked characteristic symptoms and death. Smallpox, scarlatina, erysipelas, typhus, and all febrile and inflammatory diseases should, however, be dated from the rigor and first symptoms, not from the later appearance of the eruptions, etc., etc. The time in the certificate opposite the primary disease will, therefore, include the whole term of the illness. Thus, scarlatina maligna, 21 days; purulent infiltration, 7 days; implies that the earliest symptoms of scarlatina occurred 21 days before death, and 7 days before death purulent infiltration was observed. So hooping cough, 16 weeks; paralysis of motor nerves, right side, 4 weeks; pneumonia, 3 weeks; is understood to mean that symptoms of the cough appeared 16 weeks, of the paralysis 4 weeks, of the pneumonia 3 weeks, before death. Strict attention to these suggestions ought to be paid to avoid confusion.

VII. *In fatal cases of smallpox, measles, scarlatina, typhus, and the like diseases, state whether it was the second, third, etc. attack, when the patient has sustained more attacks than one. In ague, epilepsy, convulsive and other diseases which occur in fits or paroxysms, date the illness from the first fit, and add the duration of the last fit.*

Thus "Epilepsy, 5 years; last fit, 6 hours."

VIII. *Surgeons, in all cases of operations, should return the primary disease, the operation, the secondary disease, and should state also the time from*

the commencement of the primary disease, the time from the operation, and the time from the appearance of secondary disease, reckoning in each instance to the death.

IX. *In external causes of death, the nature of the injury and the circumstances of the death should be stated; and whether by accident or design.*

The following are examples of such record: "killed on rail-road," "shot *accidentally*," "suicide," "hanging," etc., etc.

X. *When poison has been the cause of death, the time which elapses between its administration and the death should be registered, as far as possible.*

Examples:

"Laudanum, (suicide,) - - - - - 8 hours."
"Oxalic Acid, (accidental,) - - - - - - 20 minutes."
"Arsenic, (murder.) - - - - - - - 30 hours."

XI. *The cause of the disease, when clearly known, may be inserted.*

It would perhaps be impracticable to carry out this rule to any very great extent, but in some cases it might be important. No cause of disease should be given unless distinctly ascertained. The following are cases in which such a record might be made: "Tetanus, wound in the hand, 2 days;" "Delirium Tremens, Intemperance, 5 days;" "Scarlatina—exposure to the disease, four days."

XII. *The cause of death should, if possible, be certified by a physician present during the last sickness; or, when no physician was present, by such other person as might be best qualified. These rules should be observed by coroners.*

The information proposed to be obtained by the certificate in Appendix A, is divided into two parts, for the purpose of giving the physician no other trouble than merely to certify the cause of death, unless he chooses to give the other information. The sextons may obtain a personal description from other sources.

Classification.—There are many different causes of death, and many names given to the same cause. Many vague, unmeaning, and incorrect terms are often used; and it would be difficult, if not impossible, to make a statistical analysis embracing each in detail. It becomes necessary to group those that are synonymous, or nearly so, under one name; and those operating in a particular way or affecting a particular organ, under one class. The advantages of such a classification are too obvious to require discussion. It has been well said, that "a nomenclature is of as much importance in this department of inquiry, as weights and measures are in the physical sciences."

The first question that presents itself is: How shall this classification be made? Various nosological arrangements of the diseases have been proposed, possessing a greater or less degree of merit, but many of them appear better adapted to the general purpose of science than to statistical investigations. Those who study this subject will perceive that there are difficulties attending the details of any classification of diseases; and that it is not easy to make one that shall be entirely satisfactory, even to one's own mind. In making one, however, there are certain principles of known and acknowledged importance, which should be observed. Some diseases are known to have an epidemic and zymotic character, and the public health of a community is generally measured by the proportion to the whole deaths in which they prevail. Others are known not to have this character, but to be sporadic. Death is also produced by *external causes* without disease.

Here then are three classes of causes which it would seem might be separated. This division alone would, however, leave so large a portion among the sporadic, that some other subdivision becomes proper. To provide for this, a classification of diseases which affect a particular organ, has been adopted. Some special diseases, however, (dysentery for instance,) belong to the Zymotic, as others belong to the Sporadic class; and it has been suggested that the former should be divided as well as the latter. This might be useful for more minute analysis, but for general purposes too many subdi-

visions embarrass rather than simplify the information. In making investigations in which it is desirable to include all diseases of the digestive organs, it will be easy to separate the Zymotic diseases which affect these organs from the rest, and add them to those of the Sporadic class.

The following rules should be observed in making a classification of diseases for statistical purposes.

I. *All Zymotic diseases, or such as are known to be epidemic, endemic, or contagious under any circumstances, should be classed together.*

II. *All Sporadic diseases, or such as are known not to be epidemic under any circumstances, should be separated into classes, according as they affect particular organs of the body;—such as are of uncertain or general seat, forming a distinct classs.*

III. *Deaths by old age, or from external causes, should each form a class.*

IV. *For convenient reference, all the names in the classified causes of death, and others proposed to be used in the registers, and their synonyms, both popular and scientific, should be arranged alphabetically in a separate list, and accompany each other, and opposite to each the synonym by which it is defined.*

The most recent nomenclature and classification of disease, is that prepared by Wm. Farr, Esq., and used in the registration system in England. It has been generally approved, and seems better adapted for its object than any known, and might, with some modification, be adopted in this country. In preparing the nomenclature and classification contained in the appendix to this report, we have followed Mr. Farr's plan, having the rules already given in view. As a general alteration of his plans, for the purpose of more convenient reference, the names of each class are arranged alphabetically. The other alterations are as follows:—

Class 1*st*. This class is the same as the English, except that it transfers "Hydrophobia" to the 12th class, and includes "Cholera Infantum," which is considered, in this country, a distinct disease.

Class 2*d*. This class transfers "Purpura" to the 10th class, substituting Cancer for Carcinoma, and includes "Infantile Diseases." The last term is used, not because it is liked, but because many causes of death are returned under this name. When more accurate diagnoses shall be observed, the number registered under this name, and "Inflammation," and "Sudden Deaths," will be lessened.

Class 3*d*. Same as the English system.

Class 4*th*. Same as the English system, excepting it substitutes the word "Consumption" for "Phthisis."

Class 5*th*. Same as the English system.

Class 6*th*. This class throws out "Tabes Mesenterica," "Strictura," and Hæmatemesis;" and instead of "Stomach, etc., Diseases of," "Organs, etc., Diseases of," is used, that it may include special diseases of any of the organs of digestion.

Class 7*th* We have excluded "Ischuria" and "Stricture" from this class, and substituted "Gravel" instead of "Stone."

Class 8*th* In this class we have excluded "Ovarian Dropsy," and substituted "Puerperal Fever." Although this is a highly contagious disease, yet it is not known to occur except in connection with child-birth. We have thought it but proper, therefore, to class it with that cause of death. The word "Organs" has been substituted for "Uterus," as the more appropriate term.

Class 9*th*. We have not used the term "Arthritis" in this class, but have added "Hip, Disease of," and "Spine, Disease of," as deaths often happen from these local diseases.

Class 10*th*. "Carbuncle" and "Phlegm" being rare causes of death, are not used. "Purpura," being a disease of the skin, is placed here instead of the 2d class.

Class 11*th*. Same, of course, as the English system.

Class 12*th*. In the English system those terms only are used in the abstracts

for this class, "Intemperance," "Starvation," and "Violent Deaths;" but it is a matter of considerable moment to the people to have a more minute division, and we have accordingly included several others. "Hydrophobia" and "Necusia" are placed by Mr. Farr with the zymotic class; but since they arise from external injuries, it is supposed they might properly be classed here as "Poisoned," or "Intemperance."

We submit, accompanying this report, and to form a part of it, an appendix, containing papers marked A, and B. Appendix A contains a blank form for a certificate for a return of a death to the Register, and the same filled out; illustrating how it should be done. Certificates of Birth and Marriage are also appended, though not contained in the original report. The form, it will be perceived, proposes to obtain several particulars which should be recorded in tabular form in the register. The propriety of inserting the sex, place, and date of birth, and the name, condition, occupation, and age of the deceased, will become evident to any one who examines this subject, and understands the influence of this matter on human life. In giving the age, when over one year, complete years only need be used; when under one year, months or days should be inserted. It is useful also to insert the particular locality, in order to ascertain whether any influence exists there favorable or unfavorable to health and longevity. Some districts in the same towns or cities are known to be more healthy than others. It is also a matter of great personal interest in tracing connections and determining the distribution of property, to identify individuals particularly; and this cannot be done, in many instances, without the occupation and particular place of residence of the deceased, and the name and residence of the parents are given. Hence the propriety of inserting information on these matters. The *causes of death* should be accurately given; and that part of the return is separated from the other, and designed to be certified, if possible, by a professional man, or any other person competent to give the information correctly, who was present during the last sickness.

Appendix B contains the names of diseases which it is proposed should be used in making general abstracts for publication. This is divided into two parts. In Part 1st they are arranged alphabetically. In Part 2d they are classed according to the rules already given, each class being also arranged alphabetically. In making out tables for publication, it might be well to print the facts under the diseases in both arrangements, according as they are presented in the Fourth and Fifth Report of the Registration in Massachusetts. In making such abstracts, diseases which are returned under a name not found in this list, should be arranged under one of a similar character in the list.

Respectfully submitted.

(Signed) JNO. H. GRISCOM, of New-York,
LEMUEL SHATTUCK, Boston,
T. ROMEYN BECK, Albany,
EDWARD JARVIS, Dorchester, Mass.,
G. EMERSON, Philadelphia,
CHARLES A. LEE, Geneva,
} *Committee.*

APPENDIX A.—*Blank form of a return of a Death.*

I hereby certify that a ——— person died in ———, at No. —— Street (or place), on the —— day of ———, A. D. 18—. The name of the person was ———, condition a ———, the occupation a ———, and the age — years, — months, — days. Said person was born in ———, and was the ——— of ———, residents of ———. Interred in the ———.

———, *Informant.*

I hereby certify the disease or cause of death of the above person was as follows:—

CAUSE OF DEATH. DURATION OF DISEASE.

Primary disease, ————————, ————————

Secondary disease, ————————, ————————

———————— M. D., present during last illness.

Dated at ——, on the —— day of ——, A. D., 18—.

—

Form of a Return filled out.

I hereby certify that a [female*] person died in [Salem], at No. [103 Essex] street, or place, on the [22d] day of [May], A. D. 18[46]. The name of the person was [Mary E. Brown], and her condition was a [widow]. Her occupation [a tailoress], and her age [45] years, [—] month and [—] days. Said person was born in [Concord, N. H.], and was the [daughter] of [John and Mary Brown], residents of [Concord]. Interred in [South Burying Ground].

[JOHN OAKES], *Informant.*

I hereby certify that the disease or cause of death of the above person was as follows:—

CAUSE OF DEATH. DURATION OF DISEASE.

Primary disease [Measles], [21 days].

Secondary disease [Pneumonia]. [7 days].

[EDWIN FOSTER], M. D., present during the last illness.

Dated at [Salem], on the [24th] day of [May], A. D. 18[46].

—

Certificate of Birth.

Name, or sex, of child,
Place and date of Birth,
Father's name and age,
Father's occupation and birth-place,
Mother's name and age,
Mother's birth-place,

Signed,

Physician,
Parent.

Date of Certificate.

The color of the parents, if not white, should be mentioned immediately after their names. Any *deformity* of the child should be mentioned in a note.

—

Certificate of Marriage.

To be signed by the officiating clergyman, or magistrate, or officer of the church, or by one or more respectable witnesses. The color of the parties, if not white, to be stated immediately after their names.

This is to certify, that on the 18*th* day of *June*, 1847, *John S. Thomson*, a *bachelor or widower*, aged 35 years, by occupation a *carpenter*, son of *Joseph* and *Mary Thomson*, *former*, *latter*, *or both* deceased, a native of *New-York*, was united in MARRIAGE, to *Priscilla Van Woert*, a *widow or spinster*, a native of Massachusetts, aged 25 years, and daughter of *Thomas* and *Susan Van Woert*, *former*, *latter*, *or both*, deceased.

Signed,

Note.—In printing this form for use, the words in *italics* and the *figures*, must be left blank.

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* In addition to this, the color might be prefixed, if the person was not white, as Black, Mulatto, Quadroon, or Indian.

APPENDIX B.—Part 1.

Nomenclature of Diseases, Alphabetically arranged.

Abscess
Aneurism
Apoplexy
Ascites
Asthma
Atrophy
Bowels, disease of
Brain, disease of
Bronchitis
Burns and Scalds
Cancer
Cephalitis
Childbirth
Cholera
Cholera Infantum
Chorea
Colic
Consumption
Convulsion
Croup
Cystitis
Debility
Delirium Tremens
Diabetes
Diarrhœa
Dropsy
Drowned
Dysentery
Dyspepsia
Enteritis
Erysipelas
Executed
Fever, Intermittent
Fever, Remittent
Fever, Typhus
Fever, Yellow
Fistula
Frozen
Gastritis
Glanders
Generation, Organs, Disease of
Gout
Gravel
Hanged
Heart, Disease of
Heated
Hemorrhage
Hepatitis
Hip, Disease of
Hooping Cough
Hydrocephalus
Hydrophobia
Hydrothorax
Infantile Disease
Inflammation
Influenza
Intemperance
Insanity
Intussusceptio
Jaundice
Joints, Disease of
Kidney, Disease of
Killed, accidentally
Killed, by design
Laryngitis
Lightning
Liver. Disease of
Lungs, Disease of
Malformation
Malpractice
Measles
Mortification
Nephritis
Necusia
Old Age
Pancreas, Disease of
Paralysis
Paramenia
Pericarditis
Peritonitis
Pleurisy
Pneumonia
Poisoned
Purpura
Puerperal Fever
Quinsy
Rheumatism
Scarlatina
Scrofula
Skin, Disease of
Smallpox
Spine, Disease of
Spleen, Disease of
Stomach, Disease of
Strangulated
Still-born
Sudden Death
Suicide
Syphilis
Teething
Tetanus
Thrush
Tumor
Ulcer
Urinary Organs, Disease of
Worms
Unknown

APPENDIX B.—Part 2.

Nomenclature of Diseases, Classified for Statistical purposes.

Endemic and Contagious Diseases.
I. Zymotic, or Epidemic.

1 Cholera
2 Cholera Infantum
3 Croup
4 Diarrhœa
5 Dysentery
6 Erysipelas
7 Fever, Intermittent
8 Fever, Remittent
9 Fever, Typhus
10 Fever, Yellow
11 Hooping Cough
12 Influenza
13 Measles
14 Scarlatina
15 Smallpox
16 Syphilis
17 Thrush

Of Uncertain or General Seat.
II. Sporadic Diseases.

18 Abscess
19 Atrophy
20 Cancer
21 Debility
22 Dropsy
23 Gout
24 Hemorrhage
25 Infantile Diseases

26 Inflammation
27 Malformation
28 Mortification
29 Scrofula
30 Sudden Death
31 Tumor

III. *Of the Nervous System.*
32 Apoplexy
33 Cephalitis
34 Chorea
35 Convulsions
36 Delirium Tremens
37 Epilepsy
38 Hydrocephalus
39 Insanity
40 Paralysis
41 Tetanus
42 Brain, diseases of

IV. *Organs of Respiration.*
43 Asthma
44 Bronchitis
45 Consumption
46 Hydrothorax
47 Laryngitis
48 Pleurisy
49 Pneumonia
50 Quinsy
51 Organs, etc., diseases of

V. *Organs of Circulation.*
52 Aneurism
53 Pericarditis
54 Organs, etc., diseases of

VI. *Of the Digestive Organs.*
55 Ascites
56 Colic
57 Dyspepsia
58 Enteritis
59 Gastritis
60 Hernia
61 Intussusceptio
62 Peritonitis
63 Teething
64 Ulceration
65 Worms
66 Organs, etc., diseases of
67 Pancreas, disease of
68 Hepatitis
69 Jaundice
70 Liver, disease of
71 Spleen, disease of

VII. *Of the Urinary Organs.*
72 Diabetes
73 Cystitis
74 Gravel
75 Nephritis
76 Organs, etc., diseases of

VIII. *Of the Organs of Generation.*
77 Childbirth
78 Puerperal Fever
79 Paramenia
80 Organs, etc., disease of

IX. *Organs of Locomotion.*
81 Rheumatism
82 Joints, etc., disease of
83 Hip, disease of
84 Spine, disease of

X. *Of the Integumentary System.*
85 Fistula
86 Ulcer
87 Purpura
88 Skin, disease of

XI. *Old Age.*
89 Old Age

XII. *Of External Causes.*
90 Burns and Scalds
91 Drowned
92 Executed
93 Frozen
94 Glanders
95 Heat
96 Hydrophobia
97 Intemperance
98 Killed accidentally
99 Killed by design
100 Lightning
101 Malpractice
102 Necusia
103 Poisoned
104 Strangulated
105 Starved
106 Suicide
107 Wounds
108 Still-born.

Phlegmasia Dolens.—Phlegmasia Dolens consists of three distinct stages, depending on three essentially different pathological conditions.

The first may be denominated the Neuralgic stage. It is marked by the violence and excruciating nature of the pain, which is, indeed, truly and emphatically dolorous. This stage is often short, terminating frequently in twelve hours. It is sometimes, however, protracted to forty-eight hours.

The second stage may be called the albuminous. It is marked by a great diminution or total cessation of pain, when the affected part is at rest, and by an *elastic* swelling of the limb, of a white shining appearance, with exquisite soreness to the touch, with intolerance of motion. The swelling arises from the effusion of albumen into the cellular tissue.

The third stage may be fairly called serous. It is marked by a subsidence or absence of morbid sensibility in the part, with a softening and pitting of the swelling, showing it to be merely an effusion of serum in the cellular tissue.

The treatment of these three stages requires essentially different means. To arrest the first stage, a full dose of opium and camphor is required. The quantity must be sufficient fully to allay all pain. I have administered eight grains of each at a dose, in a severe case, which arrested the disease at once. By this one step, the morbid catenation may be broken up in a few hours, to return no more.

The treatment of the second stage consists in the employment of antimonial emetics. One is generally sufficient to convert a tense albuminous swelled leg into a soft serous state. If one fail, another will most surely succeed.

The third or serous stage is one merely of anasarca, and requires only the ordinary means for its removal; the most important of which is the calico bandage. This is to be accompanied with diuretics and tonics, especially a pill at bed-time, of calomel and squills, with a free use, during the day, of a decoction of Pyrola Imbellata, Asclepias, Syriaca or milk-weed, the Eygum Philadelphicum, or any other good diuretic, assisted by friction of the surface.

JAMES FOUNTAIN, M. D.

[The above note on *Phlegmasia Dolens*, which was kindly furnished by Dr. Fountain, at our request, for our edition of *Copland's Dictionary of Medicine*, was received too late for insertion in that work, which is now in type as far as the English edition has been published. In answer to many inquiries in relation to that work, we would beg to state, that we have satisfactory assurances that it is far advanced towards completion, and will be finished in the course of the ensuing year. It will not be delayed here over three months from the time of its publication in London.—Ed.]

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Unguentum Saponis Plumbæ.—Mr. Editor, I have prepared for some years past a cerate which, in appearance and in therapeutical effects, resembles closely the various *Pain Extractors*, so notoriously puffed in our city and neighboring towns. It is known to the profession in the habit of frequenting my establishment, under the officinal name of *Unguentum Saponis Plumbæ*. It is a Solution of the *Protoxide of Lead* in the fatty acids, *Margaro-Stearate of Lead*. I prepare it as follows:

℞. Olive Oil Soap,* 2 parts.
Neutral Acetate of Lead, 1 part.

Dissolve the Soap in a sufficient quantity of water, add the acetate to the soapy solution, and stir the mixture for a while; then remove or separate the aqueous portion, and take one part of the officinal Stearo-Margarate of Lead which remains in the pan, add to it 3 parts of firm hog's lard, and mix the whole together on the fire.

It is used with advantage in excoriated surfaces, burns, piles, fissures of the breast, arms and hands, sore lips, and also in some forms of neuralgia.

Very respectfully, EUGENE DUPUY.
609 Broadway, New-York.

—

To Form a good Stramonium Ointment at all Seasons.—Gather the Stramonium leaves in July and August; reduce them to coarse powder, after having

* Good Castile Soap will answer very well.

been slowly dried, and keep in a dry place. When you wish to make your ointment, moisten the proper quantity of powdered leaves with strong alcohol, put the moistened leaves in a displacement funnel, and pour your hot lard upon it; keep it, by means of a stone or water-bath, in a liquid state till the whole is passed through. If prepared according to these directions, it gives a beautiful product, not liable to become musty, and more active than that prepared in the usual mode of boiling the leaves.

To render Epsom Salts very palatable.—Boil ℥i. of Sulphate Magnesia with ℥iv. ground burnt Coffee, and ℥xij. of water for ten minutes; strain and sweeten; a small quantity of tannin renders it still more palatable.

FRANCIS DELLUC.

581 Broadway.

Alterative Cough Mixture.

℞. Solut. Cyanuret Potass, (22 grs. to ℥vii. alcohol,)
Solut. Iod. Potass, (saturated) aa ℥ss.
Solut. Morphine, ℥ii.
Syrup Acaciæ ℥ii.
M. Dose 20 to 60 drops.

H. G.

Or, ℞. of each of the three first ℥ss.
Dose 10 to 20 drops.

Medical Society of the State of Georgia.—We are much pleased to learn that this honorable body has sanctioned and unanimously adopted the proceedings of the late National Convention, on Preliminary Education and Medical Ethics. A full account of its proceedings relating to this matter may be found in the Nov. number of the Southern Med. and Surg. Journal.

New-York Annalist.—This ably-conducted Journal, by our former gifted contributor, Wm. C. Roberts, M. D., has recently commenced its second year of publication under new auspices: hereafter the Messrs. R. and G. S. Wood will be its publishers. It will appear, as heretofore, semi-monthly, at the merely nominal price of $2 per annum. All our readers who wish to become conversant with the current Medical news of the day, will find this one of the best publications that our country affords.

2.

Foreign Medical Intelligence.

SURGERY.

New and successful Method of treating Prolapsus Ani.—By Dr. Hake. (*Condensed from the London Med. Gaz.*)—The method consists in returning the bowel or hæmorrhoidal tumors with great care after the daily motion; in assisting its return by means of soap lather; in applying a coil of moist sponge firmly upon the anus, and, while retaining it there with one hand, bringing the nates together by means of a broad strip of adhesive plaster, as in approximating the edges of a wound.

This method Dr. Hake has now tested in several cases; it has never failed of success.

[The following is extracted from a letter of a patient who first put the plan to trial, and by whose ingenuity it was first conceived.]

"Ta ke a piece of sponge four or five inches long, an inch and a half wide, and half an inch thick, the more elastic the better; roll this in a damp, but not wet state, pretty tightly, so that the roll, if relaxed, would be ready to spring back into its full length, and it will then make a roll of some little substance, round, but still soft, and its length, when thus rolled, will of course be an inch and a half. Apply it, then, lengthwise, to the anus, so that it may be pressed, about the centre of it, quite home, and firmly to the part. Taking care that it may remain so, stretch a length of adhesive plaster, about fourteen inches long, and three and a half wide, more or less, straight across the nates, rather low down, and contrive so that while the plaster adheres on one side, you press the other side closer to its opposite, before you fix the length finally where it is to remain. Then sit down, at first gently upon it, and it will become very firm, and fast, so long as the plaster is good. These two pressures constantly going on, do the work without any inconvenience worth speaking of; I mean the roll of sponge always striving to unwrap itself, and the cross-band of adhesive plaster always keeping it from doing so by holding the nates sufficiently close together. The working is perfect with a little use and management. I never put this on until I am going about, or to take exercise, whether walking, riding, or driving. In the evening, I take off the plaster, but leave the sponge in its place, where it has got by that time so firmly fixed by gradual spreading and swelling, that there is no danger that anything short of great exertion will loosen it, and it is of course more comfortable to do without the plaster when it is not wanted. The sponge should be washed in cold water every time it is taken off, and in cold weather the plaster should just cross the fire before it is put on; in moderately warm weather, it will adhere of itself, especially if it is sat upon for half a minute. The same plaster is better the second day than even the first, and will do even the third, where economy is an object. Wash the parts where the plaster goes every morning, or oftener, with cold water, or water and vinegar, and the skin will never suffer. If the plaster leaves something behind it, when it is taken off, rub it with a very little spirit of wine, and the towel will remove it.

"If there be an irritation about the anus, or the gut that comes down,

wash it with vinegar and water, and the relief will be wonderful, and that part of the evil soon cured. This wash cannot be too much praised for this purpose, for piles and for the like.—(*Ranking's Abstract.*)

On Exostoses and their Treatment. By M. Roux.—(*Condensed from the Revue Medico-Chirurg. de Paris.*—Under the term exostoses, pathologists have confounded—1, Simple, permanent, or chronic hypertrophy of the whole or of a part only of a bone; 2, osteosis, with a circumscribed swelling of the affected bone; such as is often observed in constitutional syphilis; 3, aneurismal tumors of bone; 4, sarcomatous swellings of bone; 5, degeneration of bone with tumors, denominated by Sir. A. Cooper "fungous or medullary exostosis;" 6, tumors organized like the osseous tissue itself, elevated above the surface of the bone in the manner of the natural apophyses or in the form of large tubercles, produced from the external surface on which they appear to be implanted.

The term exostosis belongs properly to the latter. Exostoses generally occur singly, but occasionally more than one is met with in the same or in separate bones. Effusion into the bursa mucosa takes place over the exostoses, as in the following case:

A man, aged 22 years, presented himself, in December, 1843, with a hard, slightly-mamillated tumor, continuous with the femur at the posterior and inferior part, resembling a large apophysis at the commencement of the popliteal space. It scarcely raised the superimposed skin, although nearly as large as a child's thumb. On examining it carefully by separating the muscles between which it was placed, it was ascertained to be attached to the femur by a contracted base, a kind of thick pedicle. It was not congenital, but was first observed a few years previously, and after growing rapidly, it remained stationary for about eighteen months, or two years. Recently a new symptom had presented itself; a quantity of liquid formed between the projecting part of the tumor and the exterior soft parts. This liquid appeared to be contained in a small membranous point placed immediately over the osseous tumor, which had in consequence appeared to increase in size. This complication was no other than a small synovial collection, analogous to those which so frequently form over the patella, the olecranon, and the external malleolus, from slight contusions or habitual pressure, as shown by its having become rapidly absorbed after the continued application of a strong aqueous solution of hydrochlorate of ammonia. The patient was discharged after the absorption of the fluid, as its situation forbade the extirpation of the tumor.

[M. Roux gives a resumé of his memoir on the following conclusions.]

1. Among the different tumors of bones, there are some in which alone the name of exostosis should be applied, and which must be carefully distinguished from all those which have been comprised under this denomination.

2. Exostosis consists principally, like the bones, of a spongy or areolar tissue, with a thin rind of compact substance; or entirely of a compact tissue, very hard, and, as it were, ebarnated.

3. An exostosis of this kind adheres to the bone upon which it is developed by a contracted base in the form of a short pedicle, and proportionally large to the size of the tumor.

4. After a time they cease to grow, and never exceed a certain degree of development.

5. Generally their definitive bulk is proportional to the size of the bone upon which they are implanted.

6. Generally they have only a contiguous relation with the soft parts upon which they are situated; sometimes, however, they adhere to them.

7. They do not diminish in size, and they preserve indefinitely their primitive structure; at most their tissue acquires more density by time, the same as the bones do when they are forming.

8. According to the place they occupy, sometimes they constitute simply

a deformity; at others they cause a greater or less impediment to the functions of the organs which they border upon; sometimes they prevent the accomplishment of these functions.

9. Ablation is almost always practicable. The exceptions are where their position is inaccessible.

10. In nearly all cases ablation is indicated, either to remove a great deformity or to put an end to habitual suffering, or to re-establish the regularity of the functions of the parts.

11. In most cases it can be practised without previously exposing the tumor; and without difficulty.

12. But the operation is sometimes attended with injurious consequences, either on account of some peculiarity in the seat of the tumor, or in its relation to the neighboring parts, or on account of a bad state of the patient's constitution; generally, however, it succeeds.

[Dupuytren does not distinguish these varieties of diseased bone, nor does he thus limit the application of the term exostosis, as will be seen by reference to his work just published by the Sydenham Society (p. 408). He gives five cases of exostosis on the ungual phalanx of the great toe, and states that he has operated on as many as thirty similar cases. Previous to this time, the morbid growth in this situation has been usually mistaken for a wart, and mischievously treated as such by cauteries; or it has been mistaken for the nail growing under the skin. Dupuytren's sixth case in the same work appears to be one of very general hypertrophy of the bone; at all events, it could not be regarded as an exostosis, according to the definition above given by Roux; his ninth and last case is a very interesting one of "Exostosis on nearly all the bones," (p. 414,) of which class of cases he has seen many instances; he does not attribute them to a venereal taint, but to some irregularity of the nutritive process, "the cause and effect being probably associated, as it is in instances of similar excrescences growing from certain trees."—(*Ranking's Abstract.*)

On the Division of the Tendo-Achillis.—Professor Stromeyer has lately published the following propositions, in which he lays down the indications for, and the manner to proceed in, dividing the tendo-Achillis.

1. The tendo-Achillis ought to be divided with a small thin knife with a sharp point, and slightly rounded, employing the subcutaneous section, and cutting from within to without, taking care to make but one puncture of the skin.

2. The tendon must be entirely cut through, or the operation will be unsuccessful.

3. When other muscles or the plantar aponeurosis are retracted at the same time as the tendon, the former must always be divided before the latter.

4. After the operation the wound must be dressed with compresses, bound on with a bandage in the figure of eight.

5. With adults, on the fourth or fifth day after the operation, and with children, on the third or fourth, the first dressing must be removed; and if (as is often the case) the wound is found to be healed, it must be opened again; this must never be done when there is great ecchymosis, or when the wound suppurates.

6. Before putting the foot in the machine for extension, the limb must be surrounded by a sound bandage, and some pads of cotton must be placed on all the parts that are to be submitted to great compression.

7. Extension must be proceeded with gradually and slowly, lessening it each time it gives pain to the patient.

8. The dressings must be removed if the patient suffers much, and continued pain in the parts compressed, in order to avoid excoriations, erysipelas, or mortification of the tissues.

9. Immediately upon taking off the dressings, the limb must be enveloped in wool.

10. It ought to be known, that all those who have the tendo-Achillis

divided, have felt a sensation of cold and numbness, which is somtimes limited to the heel, sometimes extends over the whole limb. This sensation gradually diminishes, and generally disappears entirely by the sixth or eighth day.

11. The first day or the next morning after the operation, a viscid sweat of a disagreeable odor comes out on the foot, although the patient has never previously been subject to perspiration of the feet.

12. In placing the foot in the extension machine, it ought to be put in such a direction as to form a right angle with the leg; and this position ought to be maintained for eight days. After this period has elapsed, the limb must be enveloped in a circular bandage, and the patient must not be allowed to make any attempt to walk before the fourth week. Without this care, the limb will swell, the wound become irritated, and perhaps even the new tissue will give way.

13. It is impossible to name precisely the duration of the treatment. This must in some degree depend on the state of the patient, the degree of the deformity, and the extensibility of the articular ligaments.—(*Prov. Med. and Surg. Journ.*)

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Injuries and Diseases of the Muscles and Tendons of the Abdomen.—Rupture of the Triceps Cruralis Muscle.—Our extracts contain an article on this subject, by Mr. Grantham (46), which induces us to refer to a memoir published by M. Demarquai, in 1842, giving an account of all the cases he could collect of rupture of the tendon common to the rectus femoris and the two vasti, which has also been called the supra-rotular tendon. There were, at the time the memoir was published, 13 cases, in two of which the rupture occurred in both legs. Dr. Renouard has recorded a third case of the latter description.* A man, aged 59 years, struck his foot whilst running, and fell forwards. In the violent effort made to save himself he experienced great pain in both knees; an instant afterwards his legs folded under him, he fell, and could not raise himself.

When assistance arrived, his legs were strongly flexed, and there was great difficulty in extending them; but after this was effected he experienced great relief. He was taken to bed with his legs swollen; the skin became tense and shining from the first day, and on the following morning the legs were blue and yellow.

Two days after the accident, feeling no pain, the patient left his bed and attempted to walk across his chamber with the aid of two canes; but he again fell, and was obliged to call for assistance to be lifted into bed. His medical attendant now extended the limbs, and put them into splints and bandages. After about two months' confinement, but little progress was made towards a cure, and he was removed to Paris. At this period Dr. Renouard found the tendon of the triceps femoralis ruptured just at its point of insertion in both legs. The superior extremity was separated from the patella about three centimeters by the contraction of the muscles. On completely extending the limbs, the patient sitting, and pushing the patella upwards with one hand, and the tendon downwards with the other, the distance to which they were separated was diminished one-half; but when the hands were withdrawn, the parts resumed their original position. The finger could be placed in the hollow which separated the tendon and the patella, and this space was larger in the left than in the right limb.

Sitting, or lying on an horizontal plane, the patient had no power whatever to raise the left, but he could raise the right leg a few centimeters above the level. He had the power of flexing the leg on the thigh, but no power of extension. On raising him by the shoulders he could not stand alone for one moment.

Treatment.—The indications were:—1st, to re-unite the ruptured parts;

* Revue Méd., Sept. 1846, p. 55.

2d, to maintain them in contact; 3d, to attend to the general health. The uniting bandage, it is stated, failed to fulfil the first intention, since the tendon could not be kept in contact with the patella by means of it. For several reasons a suture would not answer. After exciting a great deal of pain and irritation it would certainly fail, owing to the powerful retraction of the muscle. The only plan was to maintain the limbs in a state of continued extension. This was effected in the right leg by means of a roller and two small splints placed on each side of the knee; in the left, which was the most severely injured, by means of a special apparatus, which allowed the limb to be uncovered daily to ascertain its state, and to employ aromatic and strengthening embrocations.

The right leg was left loose at the expiration of a month; the left leg required three months for a cure of the local symptoms. Five months and a half after the accident the patient walked well with crutches, and could even stand alone for a short time; and at the expiration of another month he walked with the assistance of a cane only, and the limb progressively recovered its strength.

Dr. Renouard makes the remark, that from the time that the patient was capable of extending his limb, and could stand upright, and move a few steps across his chamber, on requesting him to bend his leg, two cords were observed under the skin, proceeding from each superior angle of the patella, running parallel to each other, and losing themselves in the muscular flesh on each side of the ruptured tendon. They were at first very fine and slender, and the whole width of the patella apart from each other; but they became strong and increased in size by degrees, and by gradually approaching the median line, and ultimately they were separated by the space of only half a centimeter. When the limb was bent, a quadrilateral space was observed above the patella, into which the extremity of the finger could be placed, and the subcutaneous cords which bound it on each side might be felt. These cords had not acquired sufficient density to act completely as tendons until after the expiration of a year.

The union of tendons is believed to be generally effected either by coaptation of the divided parts, or by the aid of a new tissue formed between them. Nothing of the kind occurred in the above case; the ends of the divided tendon were never united at all; they remained divided, and their functions ceased. A tendinous cord of new formation was substituted in place of the original structure, and appeared to differ from it materially, and in nothing more than the length of time required for its complete formation.

In one of the cases collected by M. Demarquai, the patient died of apoplexy a year after the accident, and Dr. Martini found that the extremities of the ruptured tendon were united by means of "a very resistent fibrous tissue." Dr. Bouvier has also made the remark that "the formation of the new tendon is owing to the surrounding cellular tissue being first converted into a canal, and changing gradually into a solid cord of fibrous substance, which, without being exactly of the same nature as the tendon whose place it supplies, is perfectly competent to fulfil its functions."*

Myo-tenotomy.†—In an article on the indications and contra-indication for this operation, Dr. Neumann states that tenotomy has been much abused, particularly of late; and he has endeavored to determined the cases in which purely mechanical means are sufficient to effect a cure. Dr. Neumann lays it down as a principle, that there is but one pathological condition which indicates myo-tenotomy, viz: *muscular retraction.* When this does not exist, the operation is never followed by the expected result. Muscular retraction generally manifests itself by a tension and hardness of the tendon, or even of the muscle, without the means of tracing in the retraction of the limb, or

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* Mém. de l'Acad. de Méd., 1838, t. vii., p. 438.
† Casper's Wochens., Nos. 4, 5, 1845.

in the part to which it is attached, the cause of this muscular action. There are some muscles in which this preternatural tension cannot be felt, owing either to the position which they occupy, as in the cavity of the orbit, or to the smallness of their volume, which prevents its being detected through the surrounding parts. The retraction can then be detected only by the altered situation of the part, or by a derangement of its motions. Tenotomy is applicable only to *permanent* retractions, and never to *spasmodic* or *intermittent* retractions. The *retraction* of a muscle must never be confounded with its *shortening*. To convince ourselves of the importance of an error of this kind, it is only necessary to consider one of the affections for the relief of which the operation is resorted to—the *talipes equinus*. A sound man may voluntarily retract the gemelli muscles, so as to raise the heel to the height which it generally attains in this affection, accordingly there is no evidence that the tendon in this affection is shortened; it is only retracted, and tenotomy occasions this morbid retraction and rigidity of the tendinous fibres to disappear, without its being necessary to elongate the tendon Moreover, great inconveniences would result from such an elongation; the patient might place his heel easily upon the ground; but as the tendon would be too long, there would be the greatest difficulty in raising his foot from the ground, and his step would be uncertain and defective. Dr. Neumann states, also, that it is necessary to distinguish the morbid retraction which is seated in the muscles from that which occurs in the aponeuroses, ligaments, or membranes, the latter never presenting conditions identical with those of the former, but consisting, on the contrary, in a *true shortening*. The author establishes two classes of the cases which require tenotomy—1st, those which he calls *general*, and which may develop themselves in all, or nearly all parts of the body; and, 2d, those which are *special*, or occur in certain parts only. The first class comprises paralysis and ankylosis, when attended with permanent retraction of the muscles; in the second class the author places strabismus, ptosis, stiff-neck, club-foot, and the like.

The author differs from M. Guerin in the important question, whether, when many muscles are retracted, they should be operated on at one and the same time, or at intervals. He considers that when the muscles belong to the same part, or to a particular articulation, as in deformities of the feet, they should all be divided at the same sitting; but there is always considerable re-action when many muscles belonging to different regions are divided at the same time. An interval of about eight days is necessary, according to the author, before a second operation in a different part of the body is undertaken; and at the expiration of three weeks the operation may be repeated, at the same site where the first trial has been unsuccessful.

Tenotomy should never be practised, according to the author, on children under a year old; and we ought never to operate for strabismus under the age of eight or ten years, because the resources of nature frequently overcome this deformity. In club-foot, the operation should never be performed before the age of twelve years, since a cure may sometimes be obtained by machinery and gymnastic exercises. Tenotomy may be performed with advantage until the age of 40, or even 60 years; but beyond this period the rigidity of the muscles supersedes the beneficial results of the operation.

Inflammation of a retracted articulation is a contra-indication to tenotomy. In fact, the retraction of the muscles, which should be the sole obstacle to the re-adjustment of the limb, indicates, on the contrary, in the case of inflammation, a deep-seated affection of the hard parts; and in those which appear the most favorable cases, relapses are always to be expected; *à fortiori*, when the surface of articulations presents large cicatrices adherent to the subjacent muscle, and when the individual is the subject of particular inveterate diatheses, the operation is inadmissible.

As remarked by the editor of the "Archives Générales,"* these cannot be

* Sept. 1846, p. 97.

accepted as established principles until they are confirmed by a much larger number of cases than are at present before the profession.—*Ranking's Abstract.*

MEDICAL PATHOLOGY AND PRACTICAL MEDICINE.

On the Antagonism between Typhoid Fevers, Intermittents, and Phthisis.—By M. Boudin.—The following summary of M. Boudin's conclusions on this subject are given in a recent number of the *British and Foreign Review.* The facts are simple, and the sources from whence they are obtained sufficiently accurate to justify a reliance on the statements.

1. Those localities in which the producing cause of endemic intermittents thoroughly modify the constitution of man, are remarkable for the infrequency of pulmonary phthisis and typhoid fever. 2. The localities in which pulmonary phthisis and typhoid fever are particularly prevalent, are remarkable for the infrequency and mildness of intermittent fevers contracted on the spot. 3. The drying up of a marsh, or its conversion into a lake, diminishes or prevents intermittent fevers, but seems to dispose the organism to a new series of diseases, in which pulmonary phthisis and (according to the climate) typhoid fever are particularly prominent. 4. After a residence in a thoroughly marshy locality, an individual enjoys an immunity from typhoid fever, the degree and duration of which is in direct proportion, first, to the length of the previous residence; second, to the intensity of the fevers proper to the locality, considered under the two-fold relations of form and type; third, or, in other words, that a residence in a country of remittent and continued fevers, such as certain points of the coast of Algeria, and the centre of the marshy part of Brasse, is more prophylactic against the disease referred to, than, for example, a residence near the marshy embouchure of the Bievre, at Paris. 5. The conditions of latitude and longitude, and of height (above the sea) which limit the manifestation of marsh fevers, equally limit the curative or prophylactic influence of the marsh miasm. 6. Lastly, certain conditions of race, and possibly of sex, diminish the susceptibility of the system to the cause of marsh fevers, and in equal degree diminish the therapeutic influence of that cause.

The subject of which M. Boudin treats has considerable practical value in the distribution of troops, and in the hygeine of those predisposed to consumption.—(*Lancet.*)

On Cholera.—By Dr. Maxwell, Surgeon to the 3d Reg. Madras Light Cavalry.—[Dr. Maxwell finds that Cholera is produced by the same causes as intermittents; and that it generally follows great changes of climate and temperature. It prevails most in malarious localities, and is indeed closely related to fever and dysentery. As prophylactic measures, Dr. M. enumerates,]

Regular and moderate living. Avoidance of all excessive fatigue, and especially subsequent exposure. The body to be well clothed in flannel shirt from the neck to the pelvis. The exhibition of quinine and other tonics and antiperiodics.

Principles of Cure.—Vomiting being the first symptom, it is to be carefully and diligently encouraged with copious, bland, warm, or hot diluents, as barley-water, or other mucilaginous drinks, to assist nature in throwing off the congestion; in other words, to assist her in escaping into the febrile stage. Narcotics, especially in large doses, to be avoided. I consider that they paralyze the nerves, and interfere with the operations of nature. The surface to be constantly rubbed dry with flannel, and the throat, back, and chest to be covered with the same material. Should, at the same time, a febrile re-action not have shown itself (known by a slight shivering or desire to be covered up), then the epigastrium is to be rubbed unremittingly with the liquor lyttæ, till the patient is fully sensible of its action; then an em-

plastrum lyttæ is to be applied to that part, and the abdomen and loins enveloped in a flannel roller, well applied in several convolutions. The only hope depends on the blister being well and properly applied. I have tried boiling water and the actual cautery. I found them too violent, and fail. If the thirst continue, it may be relieved by effervescing draughts of bicarbonate of soda and citric, or tartaric acid, *ad libitum*. At the same time, the respiratory apparatus must be attended to; and if the dyspnœa is urgent, with a sense of suffocation, general and topical bleeding must be had recourse to, according to the urgency of the symptoms, guided by the judgment of the practitioner.

Leeches to the cardiac region should never be lost sight of, as well as to other parts of the chest. The symptoms requiring bleeding and leeches may make their appearance from the first, or they may arise at any period of the disease. They require to be narrowly watched. They are often known by a tendency to coma, as if the cerebrum were *alone* affected. Should the dyspnœa continue, and appear to proceed from participation of the recurrent nerves, and the larynx be more especially affected, then the liquor lyttæ must be well rubbed in, till its effect is produced, and an emplastrum lyttæ well applied with a flannel roller.—(*Med. Times.*)

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Effects of Etherization upon Respiration.—M. Ville furnishes a statement of researches undertaken by himself and M. Blandin, on etherization, at the "College de France." They desired to study only the act of respiration during that singular state; and, as though nothing can be foreseen in these singular phenomena, they have discovered the opposite to what they expected. Indeed, in that state of complete insensibility in which sight is abolished, in which the cold limbs have lost all power to move, respiration produces more carbonic acid than when the organs are in the full exercise of their natural functions. During etherization the carbonic acid produced by respiration increases as the sensibility diminishes, and lessens as this returns. The following are the results of a number of these experiments:

	Carbonic acid produced during normal respiration.	Carbonic acid produced during insensibility.	Preparation of ether contained in the air inhaled.	Duration of inhalation.
No. 1.	2,41	4,84	6,70	22′30″
2.	3,05	4,38	3,17	
3.	2,79	3,11	12,	4′
4.	1,36	3,32	12,68	4′
5.	2,04	4,42	14,11	2′30″

[*Trans. from Gaz. Méd. de Paris.*]—*South. Jour. Med.*

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On the Frequent Occurrence of Alkaline Urine in Health, and the Errors of Diagnosis occasioned by a Want of Knowledge of this Fact. By Dr. Krukenberg.—The fact, first promulgated by Wohler, that the internal use of salts of vegetable acids and fruits containing them, causes the urine to be secreted alkaline, has been too much neglected by succeeding physiologists and pathologists. Our author found that a much smaller quantity of fruit was necessary for the production of this phenomenon than has hitherto been supposed, viz.—2 to 4 oz. of apple pulp, or 12 plums, weighing without the stones scarcely 1 1-2 oz., sufficed to make the urine alkaline and hazy from phosphates, or if clear on excretion, heat caused their deposition; the addition of a little hydrochloric acid caused an effervescence like champagne; too much liquid, a bladder already filled with acid urine, or a disproportionate allowance of flesh, interfered with the success of the experiment. How often are those ill of chronic complaints who use a moderate diet, and with whom fruit is a useful and favorite article, troubled with hazy and alkaline urine, causing anxiety alike to themselves and their physician, which a little physiology does away with. In the simple chronic nephritis of Rayer, the chief symptom is the alkalinity of the urine; in no case was there a sectio cadaveris; and some of the cases recovered so quickly, as to justify a doubt

as to the correctness of the diagnosis; although he inculcates careful dietetic treatment, it is evident from his work that the remiotic influence of fruit in small quantities was unknown to him. This article is not forbidden at La Charité, and friends of the patients often carry them some. In several of his cases the alkalinityof the urine seemed to depend on purulent admixture, and consequent rapid putrefaction; and in one it seemed to be kept up, if not produced, by the use of an alkaline saline water (Contrexeville). The alkalinity of the urine has also been used by Prout as a diagnostic sign of certain spinal affections. These he divides into two great classes:—1st. Those arising from depressing emotions and weakening influences; and in these he recommends the use of fruit, and fluids containing malic acid, as cider and perry; to these, and not to any disease, our author refers the alkalinity of the urine. 2d Injuries of the spine; our author states, that neither Rayer nor himself had ever been able to observe the urine alkaline in cases of injuries of the spine, unless there were some existing or consecutive affection of the mucous membrane of the urinary passages, producing purulent admixture, hastening thereby the putrefactive changes in the urine. In the three cases detailed by Prout, two had stricture of the urethra, and the third retraction of the testicle, and a mucous sediment—all bespeaking the existence of some such affection. A microscopical examination, by showing the existence or absence of pus-cells in the urine, would have confirmed the diagnosis, or at once corrected it. How far inattention to diet may have led to error, cannot be specified. Prout also mentions, without explanation, what has already been referred to, viz. That although alkaline urine, by copious secretion, be clear and bright, yet boiling causes it to deposite a phosphatic sediment, which falls without any such previous process, if the secretion be more sparing; the phosphates separate before the boiling point, and from their great specific gravity fall rapidly, and may thereby, as well as by their solubility in acids, be distinguished from the albumen found in Bright's disease.—*Month. Jour., Aug.*, 1847.

Treatment of Dyspeptic Headache. By George Chaplin Child, M. D.—[We have extracted the following practical remarks from a work which we shall further analyze in our Report. They embody the views of a man who has evidently had considerable opportunities of studying dyspepsia, and its various forms. He observes that:]

There is, perhaps, no single dyspeptic symptom that causes greater suffering than headache, or of which patients are more anxious to be relieved. Many apply on account of headache solely, without suspecting that it depends on a disordered stomach; and others, although aware of this, know also that the radical cure of their complaint is likely to occupy a considerable time, and they would, therefore, feel grateful if some palliative could be devised meanwhile to lessen present suffering.

The headache following a debauch in eating and drinking, seldom requires any special treatment, provided the stomach were previously in a sound state. The erythema of the mucous membrane subsides within forty-eight hours, and with it the symptomatic headache. In slight cases, if the headache be attended with collapse and debility, a little food or a dose of sal volatile in some aromatic infusion often does good.

After gross dietetic errors in persons whose stomach is already in a morbid state, the headache is apt to last for several days, and to be accompanied with various febrile symptoms. The gastric mucous membrane is, in fact, acutely inflamed; and should there be nothing to contra-indicate it, the best treatment is to apply six or ten leeches to the epigastrium. When the headache has persisted for any considerable period, it may bring on determination of blood, and it may then be advisable to cup or leech the nape of the neck, or to apply leeches to the feet, and afterward promote bleeding and revulsion by hot pediluvia.

In violent gastric and bilious headache, and in those where there is throbbing, cold applications, as bags of ice, are extremely useful, and at the same

time, grateful to the patient; or the forehead may be occasionally moistened with a lotion containing one part of acetic ether diluted with four parts of water: ether alone, to produce the full refrigerant effect, or combined with some anodyne, as tincture of aconite.

As the primary irritation in the stomach arises from food acting on morbidly-sensitive nerves, it is always necessary to remove the exciting cause, as far as practicable, by enjoining a spare and bland diet. The undue sensibility of the stomach, as well as the predisposition to secondary pain in the nerves of the head, ought likewise to be temporarily blunted by anodynes. Of these, the extract of belladonna (gr. $\frac{1}{8}$ to $\frac{1}{4}$), or of henbane (gr. iij.), with ipecacuanha (gr. $\frac{1}{2}$), made into a pill with confection of roses, and given thrice daily, is the most useful.

In London, and probably in all large towns, the most frequent cause of headache is bilious congestion, to relieve which no remedy equals an emetic, as it strikes at the root of the disorder by thoroughly unloading the liver. This plan of treatment is nearly always admissible, for it is a mistake to suppose that an occasional emetic permanently weakens the stomach even of a dyspeptic. An emetic, however, is now an unfashionable remedy, and, what may be fairly allowed to have more weight, it is certainly a most disagreeable one. When, therefore, from this or any other reason, it cannot be given, our next best plan is to excite brisk action of the bowels, and thus drain off from the liver the suppressed or pent-up bile. At the same time, patients should be warned that drastic purgatives attain the proposed end only by the irritation they produce, first in the stomach and then in the duodenum and bowels, and that this excitement cannot fail to do mischief in cases of dyspepsia. Not only do drastic purgatives cause more irritation than an emetic, but they also unload the liver less effectually. The action of the latter is soon over, and one of its chief advantages is, that it obviates the necessity of giving large quantities of strong physic. All purgative medicines do not seem equally efficacious in procuring the downward evacuation of the bile. The best are calomel (gr. iv. to vj.), compound extract of colocynth (gr. x.), compound powder of jalap (℥ss.), and sulphate of manganese (gr. x.), in half a tumblerful of water. When this last medicine does not produce sickness, it may be given for several days in succession without inconvenience, as its cholagogue power is great in comparison to its drastic properties.

The headache, observed in some dyspeptics, may be either entirely excited, or aggravated, by uterine irritation. I have the notes of several cases of indigestion before me, wherein the patients were not liable to headache at all, except just before the monthly periods. The same fact may be remarked in menorrhagia, and in other diseases of the uterus attended with irritation. If amenorrhœa be conjoined with dyspepsia, the headache will probably be worst at the time when the catamenia ought to appear, which is often marked by what is called a molimen, or effort of nature to bring on the secretion, denoted by feverishness and an increase in the uneasy sensation usually felt—namely, pain in the back, abdomen, etc. The application of from two to six leeches to the groin, at this particular period, often causes the discharge actually to appear, and in other cases proves so good a substitute for it, as to relieve nature, and cut short the headache. Warm stupes across the abdomen ought to be perseveringly employed.

When headache is complicated with plethora, or determination of blood to the head, leeching or cupping at the nape of the neck may be necessary.—The excess of blood, however, is often local only; or, on the contrary, the absolute quantity of it in the body may even be below the healthy standard. In such cases, it may be of consequence to avoid depletion, and it will generally be found that the lost balance may be corrected in the circulation by dry cupping and blisters, or other modes of counter-irritation applied to the epigastrium, together with synapisms to the legs, and hot pediluvia.—*Ranking's Abstract.*

On the Use of Opium in Inflammation.—By W. H. Ranking, M. D., *late*

Physician to the Suffolk General Hospital.—The legitimate sphere of action of *opium* in the treatment of inflammatory diseases, is, we conceive, a point upon which our notions have arrived at tolerable precision. Under whatever modifications of individual circumstances attending such diseases the beneficial action of opium is observed, one well-marked morbid condition has, according to my observation, existed in every case, and that is an excitement of the nervous system, altogether disproportionate to the exaggeration of vascular action. This excitement is not shown in the existence of spontaneous pain alone, as we know that that symptom may be insignificant, or altogether absent, in instances of the most extensive and destructive inflammation; neither is it shown mainly by increased sensibility to local impressions. The excitement to which I allude, exhibits itself in disorders of the sensory and motor functions of the nervous system chiefly, and consists in watchfulness, or transient delirium, irregular respiration, and especially in restlessness and jactitation. In this condition of things, whatever be the violence of the local inflammation, or whatever organ be affected (excepting the brain in some instances), opium is imperatively called for. In other words, whenever, during the existence of inflammation, symptoms indicative of a loss of balance between the nervous and vascular systems exhibited themselves, sedative medicines are demanded in doses proportionate to the nervous preponderance.

This want of balance declares itself, I believe, chiefly under two conditions —1st, the existence of inflammation in a constitution naturally excitable, or in which the general powers have been reduced by the disease itself, by treatment, or by contingent circumstances relating to food, air, etc.; and, 2d, in inflammation of organs or tissues, the implication of which induces a state of things more or less approaching to that condition which, for want of a better term, we are in the habit of calling *shock*. In illustration of the first division, we may mention inflammation occurring in the hysterical constitution. In these cases, the phenomena which depend upon irritation of the nervous centres, take so decided a lead in the symptomatology of the case, that until they are controlled by opium, or some, under certain circumstances, more appropriate sedative, the inflammatory symptoms proper do not display themselves with their characteristic features. Again, inflammation may attack an ill-fed or previously-debilitated individual; or the inflammation may have been too actively combated by bloodletting, mercury, etc., without reference to the deficient resiliency of constitution, which, in children more particularly, may lurk behind an appearance ostensibly robust. In these cases there may exist from the first, or there comes on assuredly at no distant period, a condition in which opium becomes necessary to save life, to prevent, in fact, in the latter case, the anomaly of the patient "dying cured."

Under the second class of cases in which opium becomes a necessary part of the treatment, or is even mainly to be relied on, is inflammation of an organ or tissue largely supplied with ganglionic nerves, and in which, for this reason, the nervous system requires a large share of attention in the treatment of the case. Such is peritonitis or enteritis, either idiopathic or secondary; such are, also, one form of delirium tremens, diffuse cellular inflammation, and more particularly, phlebitis, the inner membrane of veins having the closest analogy to serous membrane in many respects, but especially in its large supply of organic nerves. In all these inflammations, the usual battery of antiphlogistics is worse than useless, unless combined with the liberal exhibition of opium.

The symptoms either existing *ab initio*, or, as is more commonly the case, coming on in the course of the disease, which indicate the necessity for opium, can only become familiar to the practitioner by clinical observation; but, as far as written descriptions can be relied upon, it may be stated, that the broad expression of this condition consists in a failure in the power or regularity of the pulse, pallor of the countenance, moist skin, (but not in all cases,) tendency to incoherence, with restlessness, sleeplessness, and in an aggravated form, jactitation. This is the broad outline, so to speak, of the state

referred to, but it declares itself in minor degrees, with which experience alone can render us familiar, and the appreciation of which is in itself sufficient, in many cases, to make the difference between a successful and an unsuccessful practitioner; for to persevere in antiphlogistic treatment, or to withhold opium, when these indications offer themselves, is to destroy the patient.

In the exhibition of opium when these symptoms show themselves in inflammation, I know of no drawback, no contra-indication, which should weigh for one moment against its paramount necessity. Be the skin sweating or dry, the tongue moist or dry, the bowels constipated or not, opium must be given. The constipated bowels, which are regarded by some as inducing the necessity for hesitation in the use of the medicine, I look upon as of the least importance in the generality of inflammations; in some, as in enteritis, a quiescent state of the bowels is even needful; and were it not so, the probability is, that if the case has been properly managed at first, such a clearance will have been effected as will render any risk from accumulation comparatively small.

[On the same subject Dr. Durrant observes:]

"The treatment of internal inflammation by opium," is an important practical subject, and one which I trust that we shall, sooner or later, see discussed in the pages of the '*Provincial Journal*,' by not a few only of its many talented contributors. Without entering upon the theory of the action which opium exerts upon healthy and diseased organs, I can most fully assent to the opinions which have been recently expressed by Drs. Chambers and Ranking, in reference to its utility in the treatment of many cases of acute internal inflammation. The power of allaying pain, subduing nervous excitability, and thereby reducing the irritability of the heart's action, peculiarly belongs to this drug, and however difficult or impossible it may be to instance, by writing, those particular conditions in which its adoption is so generally followed by benefit, still, how vividly will the reflecting physician, unshackled by hypothetical notions, revert to the satisfactory results which in his hands have attended its use!

In the selection of the cases most requiring the opium treatment, as also the precise period at which this medicine is called for (and this is all-important,) medical tact and observant experience can alone direct. A volume upon the subject would, in many instances, utterly fail to indicate the peculiar circumstances requiring opium, but in which to give it is recovery to the patient,—or to withhold it is probable destruction; and who cannot call to mind the look of gratitude beaming in the countenance of the sufferer relieved, if not rendered out of danger, by the timely and judicious exhibition of this valuable drug! Independently of those diseases in the treatment of which opium is commonly prescribed, as delirium tremens, and some other nervous affections, there exist others, in which at one period or other of their course, the exhibition of opiates is attended with the happiest results.

In the second stage of pneumonia, if the cough be constant and harassing, the expectoration scanty, and the countenance anxious, with an exalted state of nervous sensibility, full doses of opium at bed-time often act like a charm. In pleurisy, prior to effusion, the same medicine administered at night, giving mercury *per se* during the day, is equally valuable. If effusion obtain, the balance of the circulation is often so much interfered with, that the propriety of opium, in these cases, becomes questionable. In rheumatism, the best effects result from opiates; but in this disease, as in pleurisy, I believe that more benefit will be derived from administering opium in full doses at night, with mercury during the day, instead of the more common practice of combining the two remedies. In croup, also, in lymphatic children, after the urgency of the symptoms has abated, opium to prevent spasm is often imperatively called for. In peritonitis, enteritis, diarrhœa, and dysentery, opium judiciously used is invaluable.

The forms which I myself prefer are the crude opium and the muriate of morphia.

In reference to the constipating effects of this drug upon the bowels, I do not regard it as any reason for withholding its use. In enteritis and peritonitis, it becomes often of paramount importance, while allaying pain, to ensure quietude in the intestinal tract; and not unfrequently shall we find obstinate constipation attended with, and perhaps produced by spasm, effectualy relieved by the free administration of opium. Within the last few weeks, I have witnessed the most decidedly beneficial result obtained from the exhibition of opium, in strangulated irreducible hernia, for the relief of which neither the patient (a female, aged 64) nor her friends would sanction an operation. After all other measures had been adopted by the Surgeon in attendance, without avail, and repeated stercoraceous vomiting taking place, a grain of solid opium was administered every two hours, with the effect of not only allaying the vomiting, but also (after half a drachm had been taken) of inducing free and repeated evacuation of the bowels, which function had not previously been performed for fourteen days. The patient, although relieved from the consequences of the hernia, ultimately sank from exhaustion, the friends pertinaciously refusing a *post-mortem* examination.

In thus briefly advocating the powers of opium in the treatment of internal inflammation, I must again repeat, that it is clinical observation alone that will suffice to demonstrate, in many instances, the particular time and circumstances by which its exhibition must be regulated. When calculated to benefit, the relief which it affords is often immense; while, on the contrary, if given under disadvantageous conditions, its injurious effects may be irreparable.

MIDWIFERY AND DISEASES OF WOMEN AND CHILDREN.

Treatment of Placenta Prævia. [Dr. West's Report on Midwifery.]—Seventeen instances have been recorded in the English journals during the past fifteen months, of detachment of the placenta before the birth of the child in cases of placenta prævia. In the case recorded by Dr. Simpson, to whom it had been communicated by Mr. Cripps, the placenta was removed by an ignorant midwife, and ten hours elapsed before the child was born, during which time, however, no hemorrhage took place. In 16 out of the 17 cases the bleeding is said to have ceased immediately on the detachment of the placenta; but Dr. Everitt mentions that, although the flooding abated on the separation of the placenta, it did not entirely cease until after the application of cold externally; and he insists on the fact as proving that in cases of this kind the hemorrhage comes from the uterine as well as the placental ends of the lacerated veins. The life of the mother was preserved in every case but one, and then the previous hemorrhage had been so profuse as almost to exhaust the patient, who died three hours after delivery. All the patients were still-born, except in the case related by Mr. Stickings. [As far as the well-doing of the mother is concerned, the results of these cases must be regarded as favorable; but, on the other hand, the lives of 17 out of 18 children were sacrificed, at least half of whom would probably have been saved by the ordinary practice. In many instances, too, there appears to have been no reason why the child was not turned and extracted first, the os uteri having been well dilated or yielding and dilatable. In such cases it seems not unfair to assert that the child's life was sacrificed to the desire of performing a new operation. Several of the cases are so loosely worded that little can be gathered from them, while some have either been so carelessly observed, or so incorrectly related, as to render them quite untrustworthy.]—*Lond. Med. Gaz., Mar.*, 1847.

Spontaneous Evolution. By Dr. Keiller. (Monthly Jour. July, 1847.) When this subject was brought before the Edinburgh Obstetrical Society at its last meeting, Dr. Keiller remarked that a striking instance had occurred to him when practising in Dundee. He had seen the patient early in the

labor, but was obliged to leave her in the hands of a midwife, who, being a friend of the patient, had volunteered her attendance as a sick-nurse.

Dr. K. was not again summoned until the case had assumed the following aspect:—The liquor amnii for several hours discharged, a large swollen arm occupying the passages, the os uteri firmly grasping the obtruded shoulder of the child, and the uterine contractions unusually violent and continuous, a state of matters that had, in all probability, been encouraged if not induced, by large doses of the ergot of rye, which the "*midwife*" confessed had been administered for the purpose of bringing the case to a speedy termination.

Dr. K. failed in his repeated attempts to insinuate his hand into the uterus in order to complete the delivery by the operation of turning; notwithstanding the free use of opium, the uterine contractions continued for some time excessively severe, when, during a violent pain the arm was suddenly withdrawn from the passages, and the feet and body were almost simultaneously expelled, a rapid and complete evolution having spontaneously occurred. The child was of course dead. The mother made a good recovery.

Dr. Keiller farther stated in connexion with this case, that he had attended a *twin sister* of the patient in three of her confinements, in two of which the *placenta* presented, demanded turning, and in her third accouchement the breech was the form of presentation.

Auscultation in Labor. By A. H. McClintock, M. D. (Dub. Quar. Jour., Aug., 1847.)—I shall now briefly sum up, in the form of aphorisms, the chief points of practical interest contained in the preceding memoir, first reminding the reader that upon each point I only speak with that degree of confidence which my personal experience and observation warrant.

1. Where the fœtus is alive, the sounds of its heart may be always detected at some period of the labor, by any one of ordinary proficiency in obstetric auscultation.

2. The precise region of the abdomen in which the fœtal heart is heard, affords auxiliary evidence of the position of the child *in utero*, but can never be relied on alone for determining this point, or supersede the necessity for vaginal examination.

3. In presentations of the lower extremities, whether it be breech, foot, or knee, the fœtal heart is usually heard most distinctly in the vicinity of the umbilicus of the mother.

4. Conclusive auricular evidence of the existence of twins *in utero* is only to be drawn from the inequality of the number of the beats of the two fœtal hearts, and not merely from any difference as to their respective positions.

5. If, in the course of a tedious or difficult labor, the fœtal cardiac sounds, from having been distinct and clear, gradually become feeble and obscure, and ultimately inaudible, even with every precaution against deception, under these circumstances, their absence is entitled to rank as positive evidence of the child's death; but without the previous successive examinations this conclusion would be destitute of any positive character.

6. In cases where ergot of rye has been given to hasten delivery, auscultation of the fœtal heart is the only certain way by which we can know when the medicine is commencing to exert an injurious influence upon the child; consequently the stethoscopic indications are alone entitled to confidence for determining the exact time when the state of the fœtus calls for and justifies interference.

7. In cases simulating rupture of the uterus, the persistence of the fœtal heart's sound is a strong proof against the occurrence of the accident, and the more advanced the period at which they are audible after the setting in of bad symptoms, the more conclusive is the evidence that rupture has not taken place; whilst on the other hand, the sudden cessation of the fœtal pulsations, where they had been distinctly audible a short time previously, would strongly corroborate other existing symptoms of laceration of the uterus.

8. After an attack of puerperal convulsions in the seventh or eighth month of pregnancy, where labor has not immediately supervened, the prognosis should be very much regulated by the state of the fœtus; for if it be proved by the stethoscope that the child is alive, we may venture to hope that gestation will go on undisturbed (unless the convulsions recur); whereas, if the child has been destroyed, its expulsion will take place, most probably, in ten or fourteen days from the date of the convulsive attack.

9. No certain conclusion regarding the state of the fœtus can be drawn from the characters of the placental soufflet.

10. In cases of flooding before delivery, observation of the placental bruit may supply useful diagnostic information, by pointing out the part of the uterus to which the after-birth is attached, and thereby showing whether the hemorrhage be accidental or unavoidable.

11. Auscultation of the heart in still-born children more accurately acquaints us with the state of the child's vital powers, than any other source of information, and is, therefore, well deserving of employment in all such cases.

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Cause of Mortality in Still-born Children. (Ranking's Report in Abstract, January to July.)—The causes of deaths in still-births, with the means of preserving the infant's life, have been made the subject of an ingenious brochure by Dr. Richard King, in which the author endeavors to show that the mortality arises from syncope, and not from asphyxia, as is commonly thought to be the case; and that the great danger to be dreaded in tedious or abnormal labors is not the compression of the cord so much talked of by accoucheurs, but its non-compression; so that the fœtal blood, as the placenta becomes detached, is, as it were, sucked up by that body, and the child is in fact thus, to all intents and purposes, rendered ex-sanguine. The treatment which the author suggests, as indicated by this theory, is the compression of the cord under certain circumstances, so as to prevent the possibility of that congestion of the placenta which he regards as the active cause of the death of the still-born infant. The arguments upon which the author founds his opinions are selected with judgment, and the work is altogether worthy of the best attention of the obstetrical practitioner.

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Statistics of Midwifery. (Ranking's Abstract, January to July, 1847.)—"Maternal Mortality in seventy-two cases of placental presentations, noted by Dr. Lee.

Reporters.	No. of cases reported.	No. of mothers lost.
Dr. Clarke, - -	14	1
Dr. Collins, - -	11	2
Dr. Ramsbotham, -	19	8
Dr. Lee, - -	38	14
	72	25

"Hence, according to Dr. Lee's collection of statistics, the maternal mortality in unavoidable hemorrhage, amounting to twenty-five in seventy-two cases, is rather more than one in three. And this evidence of Dr. Lee will probably be regarded as the stronger, seeing that it is totally unprejudiced in its character; for, in 1845, Dr. Lee called into doubt the accuracy of all collections of statistical data made by others, and which led to the idea that the general maternal mortality in unavoidable hemorrhage was so great as to approach one in three. At that time he was, I believe, unaware of the general result of his own previously-published collection of statistical data relative to the point in question.

Midwifery Statistics.—The following statistical record of 21,804 midwifery cases has been drawn up by Professor Schwerer. Of these 20,610 were presentations of the head; 50, face; 97, breech; 116, feet; 3, knees; 250 were twin cases; 1, triplet; 153, cross-births; 118, abortions; 197, premature; 258, still-births; 21, monsters. Total, 21,804 cases.

Manual interference was required in 1556 cases. Version was performed 183 times, in 76 of which the mother and child were saved; in 93 the child was lost, and in 14 the mother. Spontaneous evolution occurred twice. The forceps were applied in 194 cases; with success both to mother and child in 139; with death of the child in 48, and of the mother in 7 cases. The necessity for the forceps was occasioned by the size of the head in 48 cases; by pelvic deformity in 20; by deformity of the soft parts in 3; by accidents in 123.

Dr. Robert Lee has published a table of 59 cases of placental presentation, in which the general mortality to the mother amounted to 15, or 1 in 4. In 11 of these the presentation was complete. In 34 of these turning was performed; with success in 23; unsuccessfully in 11. The placenta and child were spontaneously expelled in 5, all of which recovered; in 1 only is the hemorrhage mentioned as continuing after the expulsion of the placenta.

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Abortion, and Menstruation during Pregnancy.—[Mr. Whitehead, in a recent work on the Physiological and Morbid Conditions of the Uterus and their relations to the Treatment of Abortion and Sterility, when treating of Abortion, lays down the three following positions from the cases narrated:]

1. That what is commonly called ulceration of the cervix uteri may be the predisposing, as well as the immediately exciting cause of abortion.

2. That the purulent product of uterine ulceration, under some forms, at least, possesses virulent properties, capable of producing disease in another individual, or in another part of the same individual by inoculation; and probably capable also, by being absorbed into the circulation of the same person, of materially disordering the fluids, and of creating thereby a peculiar susceptibility to disease.

3. That the application of caustics to the uterus, and the employment of other active measures which I have heard practitioners object to during pregnancy, as likely to endanger the well-being of the offspring, may not only be safely administered, but that they constitute in fact one of the principal means of securing both mother and child from danger.

[In relation to menstruation during pregnancy, the following are his conclusions:]

1. That menstruation during pregnancy is, for the most part, perhaps always, associated with an abnormal condition, generally with ulcerative disease of the uterus, requiring at all times active remedial treatment.

2. That hemorrhage during pregnancy is not necessarily associated with an altered relation of the parts within the uterus, and, by timely care, need not interfere with the integrity of the ovum.

3. That menstruation, during the early periods of lactation, is not always natural menstruation, but that it is generally associated with morbid conditions which are amply adequate to the satisfactory explanation of the phenomenon; that secondary hemorrhage is, in the majority of instances, not owing to imperfect contraction, or atony of the uterine fibres; and that the discharge very probably proceeds, under these circumstances, not from the inner surface of the uterus, but from the diseased surfaces, situated upon parts external to the cavity of the organ.

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Case of Utero-Vesical Fistula—Novel Means of Relief.—Mr. Isaac Harrinson brought before the Reading Pathological Society the case of a woman, aged 41 years, who, thirteen days after a protracted labor, (which had to be completed by instrumental aid,) begun to suffer from a flow of urine from the vagina, not a drop passing through its natural outlet. This state had continued, to the patient's great torment, for five years previous to her coming under Mr. Harrinson's care. After repeated examinations with the speculum, the only exact information the author could obtain was, that the urine issued from the os uteri; how it came there he was unable to determine, and had almost given it up in despair, when, exploring with a small catheter in the

bladder, with the concavity downwards and a finger in the os uteri, the catheter and the finger came in contact. The problem was now solved; there was a communication between the fundus of the bladder and the cervix uteri, about three-quarters of an inch within the cervix, just at its internal orifice, and as large as to admit readily a No. 6 male catheter. After making one of these examinations, a circumstance occurred which confirmed the author in a plan he had devised for the relief of the disease. For the first time for five years she remained dry for two hours; no dribbling took place, and she then passed water in a stream. This arose, he imagines, from the tumefaction of the edges of the fistula producing temporary closure of its orifice. In July, 1841, he acted upon his plan, by proceeding to operate in the following manner:—A Brodie's catheter, armed with a long piece of twine, was introduced into the bladder, concavity downwards; and being guided by a finger within the os uteri, he readily found the rupture, passed the instrument through the vagina, seized the thread, and then withdrew the catheter, thus leaving one end of the thread hanging from the urethra, and the other from the vagina. To the urethral extremity he tied a skein of six threads of glovers' silk, oiled them, and drawing at the vaginal extremity, dragged the silk through the fistula, and then tied the urethral and vaginal ends together. The result was most gratifying. From the time of their introduction to the withdrawal of the last thread, no dribbling took place, except when the patient was using some extraordinary bodily exertion; and under these circumstances it did sometimes occur. On the 4th day after the operation, irritation beginning to be produced, the first thread was withdrawn; on the 5th the second; on the 6th the third; on the 10th the fourth; and on the 17th the fifth, leaving only one remaining;—so that in seventeen days the operation may be said to have been completed. During this time considerable irritability of the bladder existed, with great impatience of its contents, so that they were obliged to be evacuated every hour. This symptom, however, gradually subsided simply with fomentations, and without the aid of any medicines. At each recurring menstrual period the urine was, and now is, voided highly charged with the catamenial fluid. During the three subsequent months Mr. Harrinson changed the size of the thread three times, so that at last it was reduced to as small a one as could be procured compatible with any strength and durability. In October the narrator withdrew the last thread. Unfortunately he was disappointed: in twenty-five days the dribbling was as bad as ever. Mr. Harrinson was glad enough, therefore, to retreat to his former position, by introducing now four large threads. In twenty-eight days they were reduced to one, and the patient was herself again. Mr. Harrinson has purposely delayed the publication of the case, in order to test the sufficiency of the means employed. He is pleased to add (May, 1845,) that she remains in the same comfortable state. She changes the thread herself once in three or four weeks, goes about, performs her domestic duties, &c., with no inconvenience. Not a drop of urine has escaped for the last three years. The only precaution necessary is, that the thread be drawn down once a day, to cleanse it from the sabulous matter which is deposited upon it.—*Abridged from the Provincial Med. and Surg. Journal.*

MATERIA MEDICA AND PHARMACY.

Camphorated Blistering Ointment.—M. Mialhe, in an article published in "*l'Union Médicale*," upon Epispastics in general and Cantharides in particular, establishes the following principles:

1st. That the most active epispastics should be preferred; 2d, that epispastic plasters should not be allowed to remain in contact with the skin any longer than is absolutely necessary to effect the detachment of the epidermis; 3d, that the addition of camphor to blisters is of acknowledged usefulness, and ought to be generalized. The action of cantharides upon the bladder is lessened in proportion to the rapidity with which the serous exhalation is produced, because there is less cantharidine absorbed. By the addi.. n of cam-

phor, which has the property of softening resins, the blistering ointments are made more fluid, they adhere better to the skin, and consequently act more promptly. Among the means proposed to prevent the specific action of cantharides upon the bladder, none is so good as that indicated by M. Bretonneau, which consists in the interposition between the plaster and the skin of blotting-paper dipped in olive oil; the cantharides being soluble in unctuous bodies, the olive oil facilitates its introduction into the system, but this introduction diminishes as soon as the serous effusion takes place, inasmuch as oils are not miscible with aqueous fluids. Hence by this method the irritating influence of cantharidine upon the urinary organs is rarely felt. The following is M. Mialhe's formula:

℞. Cantharides,	400	parts.
Hog's Lard,	25	"
Veal suet,	25	"
White resin,	50	"
Yellow wax,	100	"
Sulph. Ether,	100	"
Camphor,	40	"

Pulverize the cantharides without having previously dried them, pass them through a sieve and suspend the pulverization as soon as you have obtained one hundred parts of fine powder; place this powder in a large-mouthed bottle, and add to it the sulphuric ether; put the remainder of the cantharides in a tinned basin with the lard, the suet and a sufficient quantity of water to float the whole; boil gently one hour, continually stirring the mass, then set aside to cool in the same vessel. Now separate the compound which floats on the surface from the matters that have settled at the bottom of the vessel; melt this fatty compound, filter through cloth into a tinned vessel upon a sand bath. Add the resin, the wax and the camphor; heat until all be completely melted; then add the powdered cantharides and ether, and heat until the ether be completely evaporated, that is to say, about an hour. Finally, pour the ointment into a marble mortar and stir until it be completely cold.

This ointment, being rather soft, should be spread thinly upon cerecloth (*sparadrap**) instead of sheep-skin, as is yet customary with some. The vesicating effect of this application is very prompt. It takes place in from two to three hours at most, according to the susceptibility of the skin, the temperature of the part to which it is applied, and the care with which it is kept in contact with the surface.

Although this ointment contains a good portion of camphor, it will be prudent to interpose the oiled paper whenever the action of the cantharides upon the urinary organs is objectionable; or, what will answer as well, the plaster should be left upon the skin not exceeding two hours or two hours and a half, a sufficient quantity of cantharides being absorbed in that time to produce the local without the general effect.—[*Translated from Bul. Gén. de Therap.*]—*South. Jour. Med.*

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On Atropine in Painful Affections of the Face.—By W. P. Brookes, Esq., M. D., M. R. C. S. E., Surgeon to the Cheltenham General Hospital.—A few weeks back I was called in to a lady in this town, suffering from a severe cold, accompanied with a most intense and painful affection of the right side of the face, forehead, and around the orbit of the eye. The pain continued after all the symptoms of the cold had left her, and I could not allay it with warm fomentations, or other common remedies. I at last tried the application of an ointment, composed of atropine five grains, lard three drachms, with one drop of atter of rose; a piece the size of a pea to be applied three times a day. The pain was allayed after the second application by day, but at night returned with as much violence

* The French "sparadrap" is somewhat similar to our patent adhesive plaster. Oil-silk would answer.—*Trans.*

as before. The remedy was continued, and after two days all pain had ceased, and has not since returned. The effect of it was so marked, that I am inclined to think it will prove a most useful remedy in painful neuralgic affections.

I must also mention the marked effect it had on the pupils of the eye, in this case, after the second application of it; they were dilated to a great extent (much more than I ever saw from any other preparation of belladonna), and continued so for two or three days after it was discontinued. I have since tried it in the case of a man on whom I operated for cataract in both eyes. The one in the right eye was not perfectly depressed, and rose again, (he had also lippitudo of the eyelids from a burn). Belladonna had but little effect on this eye (although it perfectly dilated the other,) but the ointment of atropine, three grains in two drachms, dilated it effectually. In a case of glaucoma I have now under treatment, belladonna will not increase the size of the pupil in either eye to any great extent, but the ointment does so satisfactorily.—(*Lancet.*)

On the use of Bromine in Hepatic Affections, &c.—By Dr. Robert Dick.—There can be no doubt, that in some cases of hepatic derangement iodine affords relief; and the action of bromine considerably resembles that of iodine. A congestion both of the biliary and of the blood-vessels of the liver occasionally occurs without any obvious cause: the bile is scantily discharged; the volume of the liver is enlarged; and the whole abdomen, probably from a *remora* in the portal circulation, becomes tumid, as in incipient ascites. In these circumstances, an effect seemingly magical follows the use of iodine or bromine. The liver acts and subsides, and the belly rapidly resumes its ordinary size. Magendie's formulæ for the use of bromine are still as good as any, only the doses may be considerably larger than ordered by him. Bromide of potassium, ten grains; orange or cinnamon water, four or six ounces; dose, a dessert-spoonful twice or thrice a day. Or, bromide of iron, thirty-six grains; confection of roses, *q. s.* for fifty pills; two to be taken night and morning.

In dyspeptics with strumous habits, the above formulæ, the latter of them more particularly, will be found very useful. There is a form of dyspepsia which may be said to be characteristic of strumous subjects; it also is found in persons constitutionally prone to bronchitic attacks; and in both these classes of persons, the mucous membrane of the stomach has the same inflammatory dispositions with that of the trachea and bronchiæ. It is remarkable, that so soon as abscesses form in the lungs, or purulent, expectoration begins, the irritability of the stomach disappears, appetite becomes lively and digestion vigorous.—(*Lancet.*)

Hydro-Persulphate of Iron in the Treatment of the Diseases caused by Lead. By M. Sandras. (Bullet. de l'Acad. de Med., March, 1847.)—In cases of poisoning, in general, two indications present themselves, viz.: to evacuate, if possible, the whole or a part of the poisonous substance, and to convert it into an insoluble body. In poisoning by lead, in particular, purgatives fulfil the first indication; the persulphate of iron the second, by transforming beyond the stomach, upon which it has no action, every preparation of lead into an insoluble compound, which is innocent and easy of expulsion.

The following is the method of treatment of these diseases. On the admission of the patient, and often the following days, a bath with soap is ordered to thoroughly cleanse the skin; immediately afterwards, a purgative, an agreeable drink, and a small quantity of opium if the pains are very intense or if there is insomnia, are given. At the same time, a table-spoonful of a mixture of persulphate of iron and syrup of gum arabic is given morning and evening. This treatment is continued until the cure is complete, or until there is no longer the least sign of poisoning; increasing the dose in proportion to the gravity and obstinacy of the symptoms, by which means the patient is kept constantly supplied with the antidote, which causes

no inconvenience, as it has been taken during one, two, and three months, and even in the dose of a table-spoonful every hour, without the slightest functional disturbance being created. Under this treatment the amelioration is generally perceptible on the third or fourth day. If, however, the colic, constipation, insomnia, or pains persist, the baths, simple or alkaline, purgatives and opium must be repeated, and in case of vomiting, clysters must be used.

In those cases in which the cramps are very severe, in which there is trembling, with or without delirium, and in those in which epilepsy exists, opium must be exhibited in large doses, 4, 6, or 8 grains in 24 hours, and the dose of the persulphate also increased.

In cases of general and local paralysis M. Sandras administered strychnine internally, and externally in the form of ointment. The strychnine thus employed ought to be continued, commencing by the smallest dose, until the patient experiences slight tetanic attacks, of short duration, and having their seat particularly in the paralyzed parts. Such is the basis of the treatment employed by M. Sandras, to which, he affirms, the most inveterate and rebellious cases ultimately yield. He had treated in two years, from July, 1844, to July, 1846, 123 cases, of which only three terminated fatally, and one of these was from an intercurrent pneumonia. 120 recovered entirely; 25 of this number in less than eight days, 26 in less than fifteen days, 17 in less than three weeks, 26 in less than four weeks, 13 in less than five weeks, and 13 in two or three months.

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Physiological Action of the Iodide of Potassium. By MM. Bors de Louay & Costilhes. (Gaz. Med. de Paris.) In an article on the therapeutic action of different medicines used at St. Lazare, in the treatment of Syphilis, these gentlemen remark that they have paid particular attention to the effects produced by this article, and that they occur in the following order:—

1. *Action on the Intestinal Canal.*—The first day, the dose being 0·75 gramme, (about 10 1-2 grs.) slight pain and heaviness in the large cul-de-sac of the stomach; the pain is, however, not always present; the appetite is usually increased; it is remarkable how soon after the taking of the Iodide the desire for food arises.

The following days these symptoms diminish or disappear. The second day, the dose being 1·00 gramme, (upwards of 15 grs.) heaviness of the head, colic, and diarrhœa.

2. *On the Urinary Secretion.*—This is more abundant the first day, that is, the patient passes more than he drinks. This symptom is almost constant. The urine is clear and transparent—the patients urinate more by night than by day; sometimes, however, the urine is not increased. In larger doses, 2 to 3 grammes, the urine is sometimes increased in proportion to the increased dose of Iodide; sometimes it remains normal.

3. *Eruption.*—The most frequent is the pustule of acne, which shows itself from the end of the first to the second day. It most frequently occurs on the face; it does not usually last as long as the treatment, that is, it diminishes or disappears in 15 or 20 days. Ecthyma more rarely. Neither papular erythema nor purpura hemorrhagica were observed; in one case an eczema impetiginodes was seen.

4. *Pruritus* very seldom observed.

5. *Conjunctivitis.*—The conjunctiva was sometimes influenced when the iodide was given in doses of 1 to 2 grms. Both conjunctivas may become inflamed. It principally occurred during the first days of the use of the medicine, and was characterized by general vascularity and chemosis.

6. *Menstruation.*—Although this medicine is spoken of by most authors as an emmenagogue, MM. B. & C. often remarked a decrease in the quantity of the menstrual fluid. Once the discharge re-appeared a week after the menstrual period; but this may have been only a coincidence.

7. *Discharges* from the uterine cavity were not perceptibly increased.

8. As invariable and immediate effects, the authors never once missed seeing the decrease or suspension of the pains of the bones after the first or second day of treatment. No other antisyphilitic agent possesses so prompt and constant an action.

9. *Salivation.*—This is a rare symptom in women, it was only seen once. M. Ricord observed it more frequently, perhaps, because he gave the medicine in larger doses. The saliva remained thin, the mucous membrane of the mouth uninflamed and unaltered; the salivary glands not swollen—a true hypersecretion, without peculiar smell.

10. *Effects on the Circulation*, none.

11. *On the Respiration and Bronchi.*—Notwithstanding the number of cases submitted to the action of this medicine, the authors never observed any peculiar coryza, characterized by considerable increase of thin mucous secretion without any tendency to pass into a purulent state, nor of bronchitis with sputa which continue stationary, without attaining a purulent character.

12. *Accidents produced by the Iodide.*—The authors object to giving the Iodide in as large doses as some physicians administer it. M. Biechy relates two cases in which serious accidents were produced. In the first, the patient being benefitted by doses of ¼ of a grain, gradually increased to 15 grains, thought by doubling the dose to double the advantage received. The three first days he suffered from general uneasiness and intense headache; the fourth day he was affected in his lower limbs, his sight disturbed, and his hearing almost gone; on trying to walk, his legs gave way under him, and his arms had lost all power. Finally, having taken a few steps, he fell unconscious; on coming to himself, he remained in a state of languor and weakness, which did not disappear for several days after the suspension of the medicine. In the second case, death ensued; but it was doubtful if it could be attributed to the Iodide.

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Bisulphuret of Carbon in Sciatica. By Dr. Berg, Viborg.—A countryman who, for five years, had suffered at times under a very painful sciatica with commencing emaciation of the limb, loss of appetite and sleep, and against which a great variety of remedies had been employed, was at last put under alcohol of sulphur (the bisulphuret of carbon), used both internally and externally, after the method of Wutzer. At the end of five days there was complete removal.—*In "Zeitschrift für die Gesammte Medicin." Observations of Danish Physicians, communicated by Professor Otto.*

Though the alcohol of sulphur or bisulphuret of carbon, has been known for about fifty years, yet it has been seldom put to any medical use. From the Memoir of Lampadius, it appears to have been internally employed with advantage in rheumatism, chronic gout, palsy, and cutaneous eruptions, and externally against burns: the latter use being dependent on its energetic property of producing cold.—*Month. Jour. of Med. Science.*

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TO READERS AND CORRESPONDENTS.

We have received the following works since our last:

Lecture Introductory to the Course on the Practice of Medicine in the Jefferson Medical College. Delivered Nov. 2d, 1847. By J. K. Mitchell, M. D., Prof. of the Practice of Medicine, etc., etc. Philadelphia. 8vo. pp. 24. (From the Author.)

An Address on the Bonds of Professional Union. Delivered before the Medical Association of Adams, Brown, and Clermont counties, Ohio. By J. P. Harrison, M. D., etc. Cincinnati. 8vo. pp. 28. (From the Author.)

An Introductory Lecture, delivered to the Class of Institutes of Medicine in Jefferson Medical College, Nov. 4th, 1847. By R. Dunglison, M. D., etc. Phil. 8vo. pp. 24. (From the Author.)

Lecture Introductory to a Course on the Principles and Practice of Surgery, in the Jefferson Med. College. Delivered Nov. 1st, 1847. By T. D. Mutter, M. D., Professor of Surgery, etc. Philadelphia. 1847. 8vo. pp. 26. (From the Author.)

An Essay on Strictures of the Urethra, with an Account of the Mode of Curing Stricture by Cutting. By James Bryan, M. D., etc. Philadelphia. 1847. 8vo., pp. 21. (From the Author.)

An Introductory Lecture on the Relations of Chemistry to the Vital Force. Delivered in the Philadelphia College of Medicine. By D. P. Gardner, M. D., Prof. of Chemistry and Med. Jurisprudence. (Published by the Class.) Philadelphia. 1847. 8vo., pp. 11. (From the Author.)

Lecture Conclusive to a Course on Surgery in the University of Pennsylvania, embracing a short Account of eminent Belgian Surgeons, Physicians, etc. Delivered Dec. 22, 1847. By W. Gibson, M. D., Prof. of Surgery. pp. 32. (From the Author.)

Lectures on Agricultural Chemistry. Delivered before the Senior Class of the University of Georgia. By John Le Conte, M. D., Prof. of Natural Philosophy and Chemistry. Athens. 8vo., pp. 30. (From the Author.)

The American Medical Almanac, for 1848. Containing Statistics of the various Medical Colleges, Hospitals, Dispensaries, etc., of the U. States, etc. Philadelphia: Lindsay & Blackiston. 18mo., pp. 224. (From the Publishers.)

An Address, delivered at the Castleton Medical College, Introductory to the Autumnal Session of 1847. By W. Sweetser, M. D., Prof. of the Theory and Practice of Medicine. (Published by the Class.) Troy. 1847. 8vo., pp. 15. (From the Author.)

Report of the Committee on Charity and Alms House on the Medical Department of the Alms House. New-York. 8vo., pp. 39.

An Introductory Address. Delivered in the Medical College of Ohio, Nov. 2d, 1847. By L. M. Lawson, M. D., Prof. of Materia Medica and Therapeutics, etc. Cincinnati. 8vo., pp. 22. (From the Author.)

Memoir of George McClellan, M.D. A Lecture Introductory to the Course of the Theory and Practice of Physic, in the Medical Department of Pennsylvania College, Session of 1847–8. By W. Darrach, M. D. Philadelphia. 8vo., pp. 40. (From the Author.)

The Practice of Medicine. A Treatise on Special Pathology and Therapeutics. By Robley Dunglison, M. D., Professor of the Institutes of Medicine, etc., in Jefferson Medical College, etc. 3d Edition. In 2 vols. 8vo., pp. 767, 729. (From the Publishers.)

Dublin Dissector, or System of Practical Anatomy. By Robert Harrison, M. D., M. R. I. A., Professor of Anatomy and Surgery in the University of Dublin, etc. 5th Ed. 2 vols. 12mo., pp. 871. (From the Publishers.)

A Defence of Phrenology. Containing—I. An Essay on the Nature and Value of Phrenological Evidence. II. A Vindication of Phrenology against the attacks of Dr. J. Aug. Smith. III. A View of Facts relied on by Phrenologists as proofs that the cerebellum is the seat of the reproductive instinct. By A. Boardman. New-York: E. Kearney. 12mo., pp. 222. (From the Author.)

Account of a new Anæsthetic Agent, as a Substitute for Sulphuric Ether, in Surgery and Midwifery. By J. Y. Simpson, M. D., etc., Professor of Midwifery in the University of Edinburgh, etc. Edinburgh. (From the Author.)

Lecture Introductory to a Course on Surgery, in the University of Pennsylvania. Containing a short account of eminent British Surgeons, Physicians, Scientific and Literary Men. Delivered Oct. 22, 1847. By Wm. Gibson, M. D., Prof. of Surgery. Phila. 1847. 8vo., pp. 32. (From the Author.)

Treatise on Fractures in the Vicinity of Joints, and on certain forms of Accidental and Congenital Dislocations. By Robert Wm. Smith, M. D., etc., Fellow of the Royal College of Surgeons in Ireland. Dublin. 8vo., pp. 314. (From the Author.)

On Poisons in relation to Medical Jurisprudence and Medicine. By Alfred S. Taylor, F. R. S., etc. Edited with Notes and Additions. By R. E. Griffith, M. D., etc. Philadelphia: Lea & Blanchard. 8vo., pp. 687. (From the Publishers.)

Materia Medica and Therapeutics. By Martyn Payne, M. D., Professor of the Institutes of Medicine and Materia Medica in the University of the City of New-York. New-York: S. S. & W. Wood. 1848. 8vo., pp. 411. (From the Author.)

Principles of Physics and Meteorology. By J. Muller, Prof. of Physics at the University of Freyburg. 1st Am. Edition. Revised and Illustrated by 538 engravings on wood and two colored plates. Philadelphia: Lea & Blanchard. 8vo., pp. 635. (From the Publishers.)

Catalogue of the Officers and Students of Dartmouth College, for the year 1847–8. pp. 24. (From Professor Peaslee.)

A Lecture Introductory to the Course of the Theory and Practice of Medicine in the University of New-York. By Samuel Henry Dickson, M. D., Prof. of the Theory and Practice of Medicine. 1848. 8vo., pp. 19. (From the Author.)

Report of the Board of Trustees of the Brooklyn City Hospital, for the year 1847. 8vo., pp. 21. (From Dr. Ayers.)

Anniversary Discourse before the New-York Academy of Medicine. Delivered in the Broadway Tabernacle, Nov. 10th, 1847. By John W. Francis, M. D. (Published by order of the Academy.) New-York. 1847. pp. 112. (From the Author.)

Report of the Standing Committee of the Ohio Senate on Medical Societies and Colleges. Relative to sundry petitions for the passage of a law to regulate the practice of Physic and Surgery. 8vo. pp. 5.

Eleventh Annual Report of the Trustees and Superintendent of the Ohio Institution for the Education of the Blind, for the year 1847. Columbus, Ohio. 8vo., pp. 24.

Annual Report of the Directors and Warden of the Ohio Penitentiary for the year 1847. 8vo., pp. 26.

Allopathy, Hahnemannism, and Rational Homœopathy. Compiled from the German of Dr. Griesselich, etc. By A. C. Becker, M. D. New-York. 8vo., pp. 24. (From the Author.)

Ophthalmic Memoranda respecting those Diseases of the Eye which are frequently met with in practice. By John Foote, M. D., Fellow of the Royal College of Surgeons in London, etc. N. York: S. S. & W. Wood. 1848. 18mo., pp. 131. (From the Publisher.)

The Obstetrical Remembrancer: or Denman's Aphorisms on Natural and Difficult Parturition; the Application and Use of Instruments, etc. Augmented by Michael Ryan, M. D. 1st Am. Edition. With additions of Thomas F. Cock, M. D., Visiting Physician to the N. York Lying-in-Asylum. New-York: S. S. & W. Wood. 1848. 18mo., pp. 264. (From the Publishers.)

A Text-Book of Agriculture. By N. S. Davis, M. D. New-York: S. S. & W. Wood. 1848. 12mo., pp. 187. (From the Publishers.)

A Practical Treatise on the Causes and Symptoms of Spermatorrhœa. By M. Lallemand. Translated and edited by H. J. McDougall, Member of the

Royal College of Surgeons of England, etc. Philadelphia: Lea & Blanchard. 1848. 8vo., pp. 320 (From the Publishers.)

Females and their Diseases. A Series of Letters to his Class. By Chas. D. Meigs, M. D., Professor of Midwifery and Diseases of Women and Children in Jefferson Medical College, etc., etc., Philadelphia: Lea & Blanchard. 1848. pp. 670. (From the Publishers.)

Elements of the Principles and Practice of Midwifery. By David H. Tucker, M. D., Prof. Principles and Practice of Medicine, etc., etc., in the Franklin Med. College, Philadelphia. Philadelphia: Lindsay & Blakiston. 1848. pp. 405. (From the Publishers.)

On the Causes and Treatment of Abortion and Sterility: being the Result of an extended Inquiry into the Physiological and Morbid Conditions of the Uterus, with reference especially to Leucorrhœal Affections and the Diseases of Menstruation. By James Whitehead, F. R. C. S., Surgeon to the Manchester and Salford Lying-in Hospital. Philadelphia: Lea & Blanchard. 1848. pp. 368. (From the Publishers.)

The Human Brain: Its Structure, Physiology, and Diseases, etc. etc. By Samuel Solly, F. R S., etc. Philadelphia: Lea & Blanchard. 1848. pp. 496. (From the Publishers.)

On Disorders of the Cerebral Circulation, etc. etc. By Geo. Burrows, M. D., etc. With colored plates. Philadelphia: Lea & Blanchard. 1848. pp. 216. (From the Publishers.)

Lectures on the Physical Phenomena of Living Beings. By Carlo Matteucci, etc. Philadelphia: Lea & Blanchard. 1848. (From the Publishers.)

Since January we have received the following Journals in Exchange:—

Zeitschrift für die gesammte Medicin. Herausgegeben von F. W. Oppenheim. Hamburg. For Oct., Nov., and Dec.

British Foreign Medico-Chirurgical Review, for January, 1848.

Braithwaite's Retrospect, for January, 1848.

Ranking's Half-Yearly Abstract of the Medical Sciences, for Jan., 1848.

The London Medical Gazette, for January.

——— Lancet, for January and February.

The Provincial Medical Gazette, for January.

The Dublin Medical Gazette, for January.

The London and Edinburgh Monthly Journal of Medical Sciences, for January.

The American Journal of the Medical Sciences, for Jan.

The Medical News and Library, for Jan. and Feb.

The Boston Medical and Surgical Journal, for Jan. and Feb.

The Philadelphia Medical Examiner, for Jan. and Feb.

The Buffalo Medical and Surgical Journal, for Jan. and Feb.

The American Journal of Pharmacy, for Jan.

The New Orleans Medical and Surgical Journal, for Jan.

The Western Journal of Medicine and Surgery, for Jan. and Feb.

The St. Louis Medical and Surgical Journal, for Jan. and Feb.

The Southern Journal of Medicine and Surgery, for Jan. and Feb.

The American Journal and Library of Dental Science, for Jan.

The Western Lancet, for Jan. and Feb.

The Missouri Medical and Surgical Journal, for Jan. and Feb.

The New-York Dental Recorder, for Jan. and Feb.

The Dental Register of the West, No. 2.

The American Journal of Insanity, for Jan.

The Charleston Medical Journal and Review, for Jan.

The New-Jersey Medical Reporter

The British American Journal of Medical and Physical Science, for Jan. and Feb.

The Annalist, for January and Feb.

☞ The next number of the Journal will be published on the first of May next.